BEST PRACTICES FOR PLANNING CURRICULUM FOR YOUNG CHILDREN

The Powerful Role of Play in Early Education

California Department of Education, Sacramento, 2021

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Bev Bos

This book is dedicated to Bev Bos whose philosophy, "Children Learn Best Through Play," inspired countless children to climb trees with courage, splash with joy in the mud, laugh with friends while painting on plexiglass easels, shout out lyrics for silly autoharp songs, and experience a sense of authentic belonging, safety, community, and, most importantly, an overwhelming feeling of love in her presence.

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A MESSAGE FROM THE
State Superintendent of Public Instruction

The world children are growing up in today is a highly interconnected and complex one, full of opportunities but also many complex challenges. For children to fully participate in our increasingly global world and to effectively address the most difficult problems facing our communities—including climate change, widening income disparities, and the enduring impact of structural and institutional forms of oppression—they will need to develop twenty-first century skills, including the ability to engage in critical thinking, creativity and innovation, data analysis and complex problem solving, and effective communication with diverse individuals and groups. This book clearly shows that early childhood educators have a powerful tool in their professional toolbox to help children in their attainment of these essential skills: play-based learning.

Decades of research has shown that through play, children learn a breadth of social–emotional, cognitive, and physical skills and essential dispositions for learning. For children who are impacted by trauma, play provides a place to safely express their range of emotions, feel a sense of agency and control, and build coping skills and resilience. Play is so important for young children's health, development, and well-being that it is called out as a special right of all children in the United Nations Convention on the Rights of the Child.

Despite decades of research highlighting its benefits, play is disappearing from early childhood classrooms across the nation. Unfortunately, children's opportunities to learn through play are increasingly being replaced with teacher-directed instruction and developmentally inappropriate content—changes that are not supported by developmental science. In contrast, high-quality early childhood classrooms support children in experiencing many types of play-based learning, including child-directed

free play, adult-supported guided play, and some teacher-directed playful activities. To create effective play-based classrooms that provide children with all of these experiences, teachers and administrators need access to professional learning opportunities and research-informed resources focused on children's play and adults' complex roles in supporting and guiding children's learning through play. It is for this reason that I am pleased to introduce *The Powerful Role of Play in Early Education,* an important publication filled with practical strategies teachers can use right away to create high-quality play-based early learning environments that prepare all children to thrive from their earliest years.

We know that early childhood is one of the most important periods in life for children's brain development. Every child deserves to have opportunities to develop the skills, knowledge, and dispositions they will need to succeed in our increasingly complex world. This starts by ensuring that all children have access to a high-quality early childhood program where teachers and administrators are knowledgeable about the powerful role of play in education and the comprehensive evidence confirming that play-based learning is the most effective approach for supporting children's health, learning, and overall well-being.

Tony Thurmond
State Superintendent of Public Instruction

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Introduction

Play is so important to optimal child development that it has been recognized by the United Nations High Commission[er] for Human Rights as a right of every child (Ginsburg et al. 2007, 183).

Play is a critical and defining feature of childhood, particularly early childhood. Play is a young child's world, and that world can be observed in an infant's first exploration of an object through mouthing or a toddler's attempts to climb tall steps and scoot down a slide at a neighborhood park. The child's world of play can be seen in a preschooler's fantasy world, built with blocks for small plastic animals, or school-age children racing across a playground in a game of tag. Early childhood educators, philosophers, and researchers have for centuries recognized the important role that play has in the development and growth of children.

Play is an innate need and biological behavior not just of children, but of all humans and animals. Just as humans have a biological need to sleep and eat for health and well-being, we also have a biological urge to play (Davis and Panksepp 2018; Maguire-Fong and Peralta 2018). Play is an innate way to learn and explore the world and a meaningful and authentic way for young children to develop an understanding of themselves in relation to their families and communities.

Play is an important context in which children learn, experiment with new ideas, and make sense of the world around them. Through play, children learn about their individual strengths related to unique cultural, linguistic, and family backgrounds and develop an understanding of other people and of communities that are different from theirs. As children play, they develop understandings about what is valued in their families and communities and they try to make sense of inequities they observe all around them related to race, ethnicity, gender, ability, income, and other factors. By actively designing environments that

invite children to develop relationships with other children and adults and to explore ideas and the meaningful activities in their families and communities through play, teachers can guide children to develop academic and school readiness skills while also strengthening their awareness of diversity, development of empathy, and beliefs about justice and equity.

Through play, children can also manage their overwhelming feelings about stressful or traumatic experiences. It is common for children to use play to act out their worries and concerns instead of talking about them. Children use toys, materials, and pretend play to express what they cannot verbalize and to communicate aspects of their inner world that may be too frightening or difficult to express directly. Play enables children to express themselves authentically, which can help them develop coping skills and resilience.

Play has been at the center of early childhood education and curriculum since the emergence of kindergartens and nursery schools in the United States. Despite the rich tradition of including play in early childhood education, play is disappearing from childhood and early learning settings. This trend is alarming many child advocates who recognize that loss of play in young children's lives can have detrimental effects on learning and development. And this loss is most significant for children impacted by poverty and children of color (Milteer et al. 2012). In an effort to ensure the well-being and education of young children from birth through kindergarten, this publication explores the importance of and potential for learning through play for young children in educational settings. California's foundations and frameworks (CDE 2010, 2011, 2012, 2013) highlight play as a primary context for learning. Play is also where the integrated nature of learning happens. This publication describes how play is central to designing developmentally, culturally, and linguistically responsive learning experiences for young children throughout their early childhood years.

What Is Meant by the Word "Play"?

Researchers and scientists have a difficult time agreeing on a universal definition of play. Because children's play takes many forms, no single definition applies to all of them. However, many scholars have identified particular characteristics that are commonly used in definitions of play (Brown and Vaughan 2009; Garvey 1990; Pellegrini 2009; Weisberg et al. 2013; Wolfberg 2009).

- **Play is pleasurable.** Children's delight in play is commonly accompanied by signs of positive affect (emotion) and expressions of joy. Although not essential, smiling and laughter are often signs of a playful orientation.

- **Play requires active engagement.** Children become deeply absorbed in play activities as they explore, experiment, discover, imagine, and create. Playful engagement is distinct from inactive or passive states, such as aimless wandering or resting. In some cases, daydreaming—when children play with ideas or invest in fantasy—reflects active engagement.

Active Engagement

At eight months of age, Aziza delights in the different sounds she makes, smiling as she repeats them over and over.

Four-year-old Ava giggles as she invents exaggerated "silly walks."

Observing Aziza and Ava, adults would see two children focused on and repeatedly engaging in these activities (making sounds and practicing a "crazy walk") because they are pleasurable. The children are actively engaged physically (using and moving their bodies), cognitively (thinking and problem solving), and emotionally (expressing joy and positive feelings).

- **Play is intrinsically motivated.** In play, the motivation comes from within the child, occurring without external demands or rewards.

Intrinsically Motivated

Two-and-a-half-year-old Nicole selects an eight-piece puzzle in the shape of an elephant and tries out the pieces to see how they fit.

Three-year-old Maria and her older sister are sweeping the front of their family home. While participating in their family's daily chores, they play with one another—observed through the giggles, exaggerated motions, and singing that accompanies the rhythm of their brooms sweeping back and forth.

Five-year-old Luca has drawn a picture of his grandfather Mateo walking his dog Bingo. Now Luca writes a caption that proclaims, "grnpa and bingo."

Sydney and Ben stand on the grassy knoll at the edge of the play yard. Sydney rolls a ball down the slope. Ben races down, retrieves it, races back up, and hands it to back to Sydney, who tosses it down again. This time they both race down, then run up and down six or seven times, before finally flopping on the ground, out of breath but laughing together.

In each of these examples, the children are intrinsically motivated to engage in these playful activities, which bring them joy and positive feelings.

- **Play is flexible and changing.** In play, children are free to do the unexpected, change the rules, and experiment with novel combinations of behavior and ideas. Play is forever being transformed as children vary, elaborate, and diversify existing themes and repertoires.

Flexible and Changing

Teresa and Rafael are playing in the housekeeping area. Teresa has decided that she is the mother and Rafael will be the baby. When Rafael declares that he wants a tamale, Teresa steps out of the play frame[1] for a moment and makes her implicit rules of play explicit, explaining, "You're a little baby. You don't eat food. You have to have your bottle."

Sometimes young children's play is free from external rules but has implicit, agreed-upon rules (e.g., children who are pretending to be dogs may construct their own rules for the game: "you have to bark," "you can't talk because dogs can't talk," etc.). Beginning at three or four years old, some children may enjoy early games that do have explicit rules. The implicit rules of children's play (e.g., "you are a little baby, you don't eat food") are different from explicit rules adults create for children's play (e.g., "you have to wait your turn before rolling the dice").

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1   "A frame is a boundary or a surround for something. The play frame can be a material or nonmaterial boundary (a place in the environment or in the mind or emotions) that contains play episodes that can last from moments to weeks or months … " (Kilvington and Wood 2010, 39).

- **Play has a nonliteral orientation.** This characteristic distinguishes play from nonplay behavior because children treat objects, actions, or events as if they were something else. This behavior is evident when a child transforms an object in pretend play—a broom is not used for sweeping but is used as if it were a horse. A nonliteral orientation is also apparent when children simulate realistic actions or events—they are not really fighting but are play fighting.

Nonliteral Orientation

Five-year-olds Mia, Jorge, Bo, and Tyler have been playing market. On Monday, they used large hollow blocks and unit blocks to build a store and then added pine cones and collage materials for their inventory.

On Tuesday, they made money out of construction paper, carefully cutting rectangles so the bills would be the same size and marking them with different numbers with dollar signs to indicate amounts. On Wednesday, they used an egg carton to create a cash register and decorated shoeboxes for shopping baskets.

In these examples, the children treat the blocks and construction paper as if they were other objects, reflecting the nonliteral characteristic of young children's play.

Principles That Guide the Book

The Powerful Role of Play in Early Education explains why play matters for young children of all cultural, linguistic, and ability groups and the central role of learning in young children's play. It is important for teachers who consider play an essential source of emotional, social, cognitive, and physical development to gain a deeper understanding of play, plan for children's engagement in a wide range of opportunities to play, and feel confident talking about their play-based program with families and colleagues.

A set of common principles guides this book. It includes

- descriptions of children, families, and the early childhood workforce from diverse backgrounds that are strengths-based[2];

- descriptions that acknowledge that individual developmental variation and diverse ecological contexts influence children's opportunities and experiences with play;

- empirical research and authentic narratives from teachers' descriptions as valued forms of knowledge informing the content;

- emphasis on inquiry and reflective processes to guide teachers' and administrators' practice in play-based programs;

- acknowledgment that teachers cannot work in isolation to implement high-quality play-based learning—supervisors and principals need to understand the value of play in children's learning and development and work as effective instructional leaders in collaboration with teachers and staff; and

- a belief that engaging families in their children's play-based learning is valued by teachers and their supervisors.

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2   A strength-based approach assumes that all children and families have resources, personal characteristics, and relationships that can be mobilized to enhance their learning, development, and well-being, no matter how many risk factors or challenges they face (Center for the Study of Social Policy 2012).

Overview of the Book

This book was written primarily for early childhood teachers and providers. However, the information in this guide is also relevant for supervisors and principals, infrastructure staff, and child advocates.

- **Chapter 1: A Continuum of Play-Based Learning**. This chapter defines play-based learning as existing along a continuum and outlines the many benefits of play for children's learning and development. The decline in opportunities to play is introduced and explained and common myths that prevent teachers from embracing play-based learning are discussed along with strategies for effectively addressing them.

- **Chapter 2: The Critical Role of Play in Children's Learning and Development**. This chapter describes children's development and learning from different scientific and cultural perspectives. It also introduces the different types of children's play and play as the essence of integrated learning.

- **Chapter 3: The Essential Roles of Teachers and Administrators in Supporting Play-Based Learning**. This chapter describes arranging play spaces to be contexts for learning. The various roles teachers can take in orchestrating children's play are introduced. Additional topics include observing, documenting, interpreting, and assessing play and engaging families in play-based learning. The chapter closes with a look at the essential role of administrators in supporting play-based early childhood programs.

- **Chapter 4: The Importance of Risk-Taking in Children's Play.** This chapter introduces a framework for thinking about a continuum of risk and the importance of teaching children how to engage in self-assessment of risks. A tool to support programs in conducting risk-benefit assessments of children's play is described. Outdoor play is described as an ideal opportunity to support children's big body play and developmentally appropriate risky behavior. The outdoor classroom can be a complex learning environment for children to initiate and practice language, numeracy, problem solving, and negotiation while experiencing a relationship with nature.

- **Chapter 5: Using Play to Support Inclusion.** This chapter explains inclusion in play culture and ways to maximize access, participation, and support for young children with disabilities. The principles of Universal Design for Learning are introduced and linked specifically with play.

- **Chapter 6: A Trauma-Informed Approach to Play-Based Learning.** This chapter opens by discussing the impact of stress and trauma on young children's learning and development and the impact of trauma on children's play. Strategies for managing difficult content that enters children's play and recommendations for creating trauma-informed play-based environments are discussed. A brief section provides information on requesting additional mental health resources for children who need extra support. The chapter closes with a reminder about the importance of teacher self-care when working with children affected by trauma. Play as an important form of self-care practice for adults is also discussed.

- T**he final sections of the book include a conclusion**; a **glossary**; a list of **resources**, including national organizations and websites, research, reports, fact sheets, and best practices related to children's play; and a comprehensive **reference list**.

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This chapter:

- Defines play-based learning
- Introduces the play continuum which describes play-based learning across a spectrum of experiences
- Introduces the many benefits that play affords children's learning, development, and overall well-being
- Summarizes research documenting the decline in children's opportunities to engage in play at home and at school
- Reviews common myths about play that prevent teachers from embracing play-based learning and presents strategies for responding

Play-based learning is an approach to curriculum and instruction that emphasizes the use of play to support children's learning across all domains of development. Rendon and Gronlund describe the many components of play-based learning, including planning for the classroom arrangement, materials, time in the daily schedule, and learning goals associated with play (2017). They describe the need for teachers to plan intentionally while also remaining open to children's spontaneous and emergent discoveries and interests in play-based learning (Rendon and Gronlund 2017, 21):

> One caution about these categories—free play versus guided, child directed versus teacher directed, even high level versus low level. They are not fixed and rigid. All play will be more or less free, more or less child directed, more or less high level. What we need to do is develop the skill to observe and evaluate play with these categories in mind.

> One of the potentially challenging ideas we are presenting is that some of the learning that takes place while children are engaging in child-directed play is "accidental" or "unanticipated" by the adult. Teachers have to be open to this possibility and ready to recognize when such learning happens. Remember, however, that even with "accidental" learning, teachers still plan—they just make their plans rich enough to create space for the unexpected.

Intentionality, planning, guiding, and facilitating do indeed go together in bringing about playful learning experiences that reflect the properties of meaningful, high-level play.

The Play–Based Learning Continuum

Children's play is best understood as representing different points along a continuum (Jensen et al. 2019; Zosh et al. 2018; see figure 1 and table 1). When play is at the center of the curriculum in high-quality play-based programs, teachers plan for and allow children to participate in several types of play across this continuum.

Young children need many opportunities to engage in self-determined play and should be continuously supported through adult-child collaborative play. Adult planned and directed play should be limited, especially for children birth through kindergarten. The balance among these different types of play will vary across programs, based on an approach that is responsive to the child's developmental level, interests, and cultural backgrounds, and is aligned to the goals of the families and the philosophy of the early childhood program or school. The role of the teacher is to take into account all these factors in deciding which form of play to plan and support throughout the day.

Figure 1. Play-Based Learning across a Continuum

| Child Self-Determined Play | → | Adult-Child Collaborative Play | → | Adult Planned and Directed Play |

Child Self–Determined Play

- Play is centered on the dynamic and emergent capacities, skills, and interests of the children.

- Children have the freedom and responsibility to be in charge of the meaning, direction, flow, and outcomes or learning goals associated with the play. (This type of play is often described as "free play.")

- Children are given agency to choose their activities and materials, ask their own questions, define and solve their own problems, and explore and make their own discoveries through both solitary and collaborative experiences.

- Teachers relate to children's play initiations with an attitude of respect, flexibility, openness, and curiosity.

- Teachers observe, listen to, document, and acknowledge children during play. They plan the environment to support and extend children's interests and skills. They observe the themes children explore in their play and further develop the play through additions to the environment and curriculum.

What does it look like in an early childhood setting?

Infants and Toddlers: A child grabs a rattle and shakes it, listening to the sound.

Preschool: A group of children use wooden and plastic building blocks to create structures that are dynamically designed and created entirely in response to their own interests and ideas.

Early elementary: A child chooses a game of checkers to play with a friend.

Adult–Child Collaborative Play

- The child and adult work collaboratively to create the play context. Play is motivated by the child's interests and supported through adult guidance and scaffolding.

- Children initiate and direct their play based on interests and internal motivation. Adults build on the children's ideas and interests to expand and extend the play in ways that support the development or strengthening of skills, knowledge, and dispositions.

- Learning is driven by the child (e.g., the child initiates play based on their interests and maintains agency throughout the play experience) and the adult (through different types of interactions with the child intended to offer support, increase engagement, or extend the development of skills and knowledge).

- Children and adults share responsibility for the meaning, direction, flow, and outcomes associated with the play.

- The choice of activities, materials, and play partners, in addition to the focus of exploration and discovery (e.g., questions asked and problems solved), is made by children and adults. The level of agency of the child differs by context and level of guidance offered by adults.

- Adults relate to children's play initiations with an attitude of respect. They follow the child's lead and expand upon their interests in play. Adults sets goals that use a child's interests as starting points for supporting individual learning needs. They observe, build on, and extend children's thinking and ideas during and outside of play.

- The amount of support, guidance, or scaffolding an adult provides to children can vary significantly across different contexts—from offers of limited support to more significant forms of involvement:

  ○ **Minimal guidance.** Sometimes a teacher's involvement in play may be very limited, with the goal of helping to continue and develop it. For example, a teacher offers a new prop—a cardboard box—to a group of children pretending to bake cookies at a bakery shop and asks if they would like to use it to create an oven. Or, a teacher observing a child who is exploring with blocks describes what they see: "You are stacking the blocks. They are almost as tall as you are!" When the child responds, "I'm making a tall skyscraper," the teacher asks, "What happens inside?" to extend learning by encouraging the child to create a narrative to go along with the block construction.

  ○ **Moderate guidance.** At other times an adult's guidance may be more involved. A teacher might select materials, equipment, or playful activities to introduce to children that build on children's expressed interests and self-determined play. For example, after observing children's interest in observing and talking about snails in the school garden, the teacher might introduce several opportunities

for children to extend their knowledge of snails (e.g., encouraging children to take magnifying glasses to the garden, documenting the children's curiosities and questions about snails, and then following up on these by reading books about snails, talking about them, and continuing to observe and share observations together).

- ○ **More intensive guidance.** In order for children to fully engage in self-determined or peer play, an adult's more intensive guidance may help. In this case, the adult may need to provide play prompts to a child, give a child direction on how to engage in the play, or provide special materials as a way to engage a child in self-determined play and play with others. For some children with disabilities, teachers might use high-touch guidance as a step toward promoting child self-determined play. For example, if a baby is visually impaired, the adult might introduce materials with textural and auditory components and provide guidance in using them as a first step toward enticing the child to interact with the materials in self-determined play. While this might be seen as adult-child collaborative play, without the preparation by the adult, self-determined play may be less likely.

What does it look like in an early childhood setting?

Infants and Toddlers: An infant is sitting up and exploring a ball by holding it and mouthing it, then drops it to watch it roll across the floor. The adult rolls the ball back to the infant. The infant then picks up the ball and drops it again to watch it roll another time. The adult rolls the ball back once more. Now, the infant continues with an expectation that the adult will roll the ball back.

Preschool: After observing that several children are engaging in imaginary play—playing doctor—the teacher opens a discussion with the class about creating a doctor's office in the dramatic play area. The teacher guides the class in discussing what materials would be needed to create a doctor's clinic by asking the following open-ended questions: "What are some things that a doctor may use? What signs might we see at a doctor's office? Who works at a doctor's office? What do they use to do their jobs?" The teacher writes the children's ideas on an easel and later shares this information with families in a newsletter. Together, the teacher and the children (and their families) identify the materials and resources needed to create the

doctor's office. Children create signs for the reception area and forms for the patient and doctor to fill out. They build a scale from blocks and the teacher and families provide props (doctor's coat, play stethoscope, etc.). The teacher and students discuss any changes and additions needed. During play, children take on various roles within the doctor's office, such as doctor, nurse, patient, and receptionist, and act out their own scenarios. The teacher provides guidance and extensions to the children's play, for example by introducing the concept of an x-ray machine, assisting children to research them in books or on tablets, and providing the materials for children to build their own. In this example, the teacher and children are working together to design the doctor's office and the resources to be used in the play. The children then direct the play within the created environment (Play Learning Lab 2018).

Early elementary: The teacher observes several children express an interest in trains through their play, drawings, and dialogue. The teacher adds books on trains to the classroom library, reads a few of the books during class read-alouds, and invites children to share their interests and ideas with one another in small and large group conversations about trains. When children express an interest in creating a train station in class, the teacher helps them to do so by bringing in materials for the dramatic play area, including an arrival/departure sign, conductor hat and overalls, train schedule, walkie talkies, and tools. The teacher encourages children to create a train schedule, tickets, and paper money and to role-play various scenes with the train arriving and departing, which allows them to practice their emerging literacy, numeracy, and social–emotional skills. The teacher also helps students to use the wooden blocks to construct train tracks, trains, and signs (e.g., "Slow down").

"If a child initiates a context for play and then an adult intervenes to direct the play within that context, we enter **co-opted play**, not guided play. The child might have been interested in building a circus out of blocks, yet the well-intentioned [adult] swept in to declare that the animals were at the zoo, redirecting the child's vision and robbing her of some agency in the play experience. When adults initiate and direct using playful elements, the scene more closely resembles direct instruction—even if it is dressed up in playful 'clothing.'" (Zosh et al. 2018, 3)

Adult Planned and Directed Play

- Adults plan, initiate, and direct the play. The role of the child is to follow along with adult directions. Children should be actively engaged during the activity.

- Adults are in charge of the direction, flow, and outcomes or learning goals associated with the play. Motivation for play emerges from adults' interests and goals for children's learning.

- Adults prepare environments and materials and plan and implement activities to provide children with practice in specific concepts, skills, and dispositions (e.g., math and literacy skills, disposition of curiosity, and ability to ask questions) or to expand their understanding of specific information determined through their planned goals for children's learning.

- Adults guide and scaffold children's learning through the use of activities, materials, and explicit instruction toward a predetermined outcome. They observe children's efforts and provide different levels of support as they guide them toward acquiring the intended learning goal or skill.

What does it look like in an early childhood setting?

Infants and Toddlers: An adult takes the hands of the infant and moves them together so that the infant gently "claps." The adult continues this repeatedly while singing the song "Patty Cake."

Preschool: Teachers guide children in listening and following the directions to a freeze dance song, which consists of children dancing to music and freezing mid-pose when the music stops. This activity supports children in learning listening skills and self-regulation.

Adults introduce the game, facilitate children's participation, and monitor the game to ensure that the rules are being followed.

Early elementary: The teacher tells the class that they will be playing "Letter Bingo," a game that focuses on building letter recognition skills. The teacher explains the rules of the game and guides children in learning to play. Another example is a teacher-designed activity for transitional kindergarten—"Play Dough Worms"—a math game that helps children learn one-to-one correspondence. Adults lead children through the game by asking them to use play dough to make an assigned number of worms (determined through rolling a die or drawing a number card) which they then place on themed place mats.

(Examples adapted from: Play Learning Lab 2018)

Table 1. Child Agency and Role of the Adult in Different Types of Play-Based Learning across a Continuum

The Play-Based Learning Continuum	Child Self-Determined Play (child led)	Adult-Child Collaborative Play (child led–adult scaffolded)	Adult Planned and Directed Play (adult led)
Image of the Child	a capable, engaged, and self-motivated learner whose interests and ideas are taken seriously and respected by the adult	a capable and engaged learner who benefits or learns from a more capable play partner or an adult	a developing child who lacks maturity, experience, and knowledge and requires adults to facilitate their learning and socialization
Who initiates the play?	child	child	adult
Who has agency to shape the learning goals?	child Learning goals emerge dynamically from the child's interests and intrinsic motivation.	child and adult Learning goals emerge dynamically from the child's interests and intrinsic motivation and the adult's ideas and desires (expressed through scaffolding and guidance strategies).	adult Learning goals are planned, monitored, and adapted entirely by adults.

| The Play-Based Learning Continuum | Child Self-Determined Play

(child led) | Adult-Child Collaborative Play

(child led–adult scaffolded) | Adult Planned and Directed Play

(adult led) |
|---|---|---|---|
| **What is the role of the adult?** | The adult observes, listens to, documents, and acknowledges children during play.

The adult observes the themes children explore in their play and helps children build concepts to further develop their play, through enhancing the environment and curriculum and encouraging children to reflect on their play. | The child chooses what to do and how to do it.

The adult is present and interacts with children but does not direct their play.

The adult observes, builds on, and extends children's thinking and ideas within and outside of the play frame. | The adult prepares the environment and materials to correspond with a specific learning goal.

The adult provides explicit instruction. |

◆ **Teacher Reflection:**

Review figure 1 and consider:

- What types of play do children experience in my program?
- How much time do children in my care spend engaging in different types of play (child self-determined play, adult-child collaborative play, adult planned and directed play)?
- What is one action I can take to expand children's opportunities to engage in child self-determined play?

Why Is Play Important for Young Children?
What Are the Benefits of Play?

Play is a human right for all children. For many advocates of play and play-based learning, a child's right to play is at the center of why play is important. In 1989, the United Nations Convention on the Rights of the Child was established to recognize that all children have certain rights from birth, including the right to participate in the social and cultural life of their communities, to express their opinions, and to have their viewpoints respected, heard, and acted upon whenever possible. The United Nations Convention on the Rights of the Child led to an international expansion of policies and legislation seeking to strengthen children's voice and agency in decision-making contexts (Lewis 2010; Victoria University of Wellington 2010).

At the time of writing, every country in the world except the United States has ratified the United Nations Convention on the Rights of the Child. Despite the lack of formal adoption by the US, many educators and child advocates have recognized the necessity of promoting the child's right to play by providing resources to children to protect them from harmful practices and to allow them to participate in their world. In the context of the educational system in the United States, promoting the child's right to play translates into allowing children time and materials to learn through various play-based experiences and recognizing that insufficient play opportunities can be harmful to children's health and well-being.

Article 31 of the United Nations Convention on the Rights of the Child

"States Parties recognize the right of the child … to engage in play … appropriate to the age of the child and to participate freely in cultural life and the arts" (United Nations 1989).

The International Play Association video on the importance of play for children is available at http://ipaworld.org/ipa-video-this-is-me-the-childs-right-to-play/. The **International Play Association** is an organization that promotes awareness of Article 31.

From a human rights perspective, play as a form of learning and exploration is acknowledged to be a critical part of being a child and having a healthy childhood. Understanding access to play as a right of every child means that educational settings for children must include play. In 2009, the United Nations Committee on the Rights of the Child urged states parties, as articulated in its "General Comment No. 12: The Right of the Child to Be Heard," to create contexts in which children can express their views on the most important issues that influence and affect their lives, to listen carefully to children's ideas and perspectives and take them seriously, and to relate to children as active participants in authentic decision-making processes (UN Committee on the Rights of the Child 2009). When adults take seriously children's right to be heard regarding their perspectives on learning and play, they learn how much children value play and why that is the case (Nicholson et al. 2014).

Play supports children's agency to make their own choices and to develop skills in self-determination and awareness of diversity in self and others, which are fundamental to a democratic society. At first look, a connection between play and democracy might not be obvious; however, education philosopher John Dewey outlined the connection in *Democracy and Education* (1916), a text that significantly influenced the field of early childhood education. Democratic ideas and practices are central elements of play-based learning—children have the opportunity to make choices and decisions on their own or in collaboration with others when they play socially in educational settings. Children continually make decisions about whom to play with, which materials to use in their play, and the stories and goals that drive how they play. This simple act of making a choice is the beginning of a lifetime of making decisions for

oneself. Also, the act of playing with others requires children to communicate their ideas and often to negotiate and solve problems collaboratively as they grow in their awareness and understanding of diverse opinions and perspectives beyond their own. All of these opportunities to make decisions, communicate beliefs to others, solve problems collaboratively, and learn to respect diverse viewpoints and disagree peacefully help children to develop the skills required of participants in a healthy democratic society.

The following vignette demonstrates how a group of kindergarten children use communication, negotiation skills, and a democratic process to figure out a fair way to use materials during playtime:

> Suriya, age five, enters the dramatic play center in her kindergarten classroom where Kate, also age five, is pretending to be mother to several stuffed animals. Suriya takes one of the stuffed animals and Kate protests. Suriya explains that she and her friends need animals for their block construction across the room. Kate states that the stuffed toys are only for the pretend play area. As they continue to argue over the toys, more children come over to join the discussion. Two children who like to play in the center with Kate support her side of the argument. Two other children take Suriya's side, suggesting that the stuffed animals could be used in other locations in the room. Unable to reach an agreement, the children turn to the teacher, who suggests holding a class meeting to decide as a group what to do. Later, the children gather in a circle. With the teacher's guidance, each child takes turns sharing their opinion about how to solve the disagreement. The group decides that stuffed animals can be used in other areas in addition to the dramatic play center. The children work together to decide where the toys are placed in their classroom.

Suriya, Kate, and their peers, with guidance from their teacher, are learning through play about some of the foundational principles of a democratic society—that every citizen has basic rights, including the right to hold their own beliefs, to say and write what they think, and to seek different sources of information and ideas. And they are learning that each individual has a responsibility to exercise these rights peacefully (often through oral and written expression).

Play is an innate need and biological behavior of humans and animals. As previously stated, all humans have a biological urge to play (Davis and Panksepp 2018; Maguire-Fong and Peralta 2018). Research shows that people play throughout their life and in every culture around the world. Archeologists have found artifacts that show that ancient peoples also played (Huizinga 2016). In all parts of the world, people play and see others playing. In extreme instances, humans and animals have even exhibited signs of mental stress such as depression and physical illnesses when deprived of play (Brown and Vaughan 2009).

Play Is an Innate Attribute of People and Animals

It is a sunny fall day, and Graciela has taken a small group of four-year-olds on an exploration walk in the neighborhood. Suddenly, they stop and Imani calls out, "See the kittens under that bush! And there's the mother!"

As they all gather around excitedly, Daniel kneels on the pavement and cautions, "Don't disturb them. We have to be quiet." They sit down on the pavement and watch silently. There are five small kittens. Graciela thinks they look just a few weeks old.

Imani whispers, "See, those are nursing and those are crawling." Then she adds, so quietly it is hard for Graciela to hear: "See, they're tumbling and chasing … they're wrestling-fighting! Are they hurting each other? What will their mom do?"

They all stare intently at the kittens and their mom.

"No," Sydney declares. "They're playing and their mom knows they're playing. She's not worried. See, now they're running around. Can you hear their meows? They're talking to each other."

Play supports children's learning and development.[3] Decades of child development research documents foundational principles on how young children learn best (Hirsh-Pasek et al. 2009; Zosh et al. 2018):

- Children learn best when they are active, engaged, and minds-on. Children learn when they can engage in the process of generating hypotheses, testing those hypotheses, and then using the generated data to inform their own understanding in an iterative process. Children work like scientists generating new hypotheses, testing those hypotheses using minds-on thinking, and updating their understanding based on exploration and discoveries (Gopnik, Meltzoff, and Kuhl 2000).

- Children learn best when their social and emotional needs are met and they are able to interact with responsive and caring adults and peers (Immordino-Yang and Damasio 2007). When children experience positive affect (emotions), they are more likely to be creative; creative thinking is associated with increased learning (Isen, Daubman, and Nowicki 1987; Resnick 2007; Zosh et al. 2017). Experiencing surprise is also associated with increased curiosity and exploration, therefore is learning potential for young children (Stahl and Feigenson 2015).

- Children learn best when new information is presented in a meaningful, familiar, and culturally and linguistically relevant manner.

- For young children, the process of learning is as important as the outcome of learning.

- All children have diverse needs and different backgrounds that influence their learning.

Because play-based learning integrates all of these principles, it is the optimal approach to use in early learning environments to support young children's learning. Play allows children to be active, socially engaged in

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3. When educators and researchers state that play supports development and learning, they recognize that development and learning are two different concepts. **Development** generally refers to physical, cognitive, or psychological changes over time. These changes can be observed in different areas, or domains, of growth: physical and motor development, cognitive development, language development, and social–emotional development. **Learning** refers to the process of observing, having experiences, or being instructed in a process that results in new ideas and responses to the world.

their everyday lives, and supported by thoughtful adults. Additionally, open-ended play facilitates caregivers' flexibility in responding to each child's interests, strengths, and needs, including their unique cultural, linguistic, and family backgrounds.

Play provides information about cognitive and language comprehension of children who are delayed in their expressive language or are newly learning a spoken language. Play can be a bridge between children who speak different languages, or between a child without verbal skills and other children. For example, picking up a small doll and "walking" the doll over to another child with a doll near a playhouse communicates interest and understanding that the dolls can interact.

Teachers can integrate formulaic phrases in the child's home language to help create an inclusive environment for multilingual learners. Other children can also learn key words or phrases to encourage nonnative English speakers to play. In the example below, Martin, a preschool teacher, encourages Yin, a 4-year-old child who recently arrived in the US from Taiwan, to join her classmates in a pretend play game by including words from her home language:

Martin has been reading "To Market, to Market" to the class and the book is propped up by the pretend play area. He sees Yin playing with the pretend play food. She has set up little plastic buckets and is filling them with items. Martin approaches her, picks up a piece of paper, and writes "Apples," just like it is on the shopping list that is included in the book. He asks, "May I have three apples please?" Yin looks up and smiles, recognizing the game, but looks unsure. Martin repeats the sentence, pointing at the plastic fruit when he says "apples." Yin smiles again and puts two apples in a basket, then gives him the basket and says, "Apples, is five." Martin, smiling too, looks for pretend coins and asks, "Is it five dollars for the apples?" "Five dollars for the apples, please," says Yin. Martin gives the money to Yin and says, "Thank you! Xièxiè!" Yin repeats, "Xièxiè! Thank you!"

Decades of research provides significant evidence of the benefits of play for children's learning and development (Alfieri et al. 2011).

- Play strengthens children's **cognitive development**, including language skills, problem solving, perspective taking, representational skills, memory, and creativity (Jones and Cooper 2006; Singer et al. 2003; Zigler, Singer, and Bishop-Josef 2004), as well as mathematical thinking (Fisher et al. 2013; Reikerås, Moser, and Tønnessen 2017).

- Play develops **citizenship** (Adair et al. 2017), and beliefs about diversity, fairness, equity, and social justice (Derman-Sparks and Edwards 2010).

- **Play strengthens social skills**, including turn taking, collaboration, rule following, empathy, impulse control, and motivation (Corsaro 2003; Krafft and Berk 1998; Ramani 2012); the ability to **express emotions** (Rogers and Sawyers 1988); and the development of **self-regulation and executive functioning** in young children (Barker et al. 2014; Bodrova and Leong 2007; Elias and Berk 2002). It also has benefits for **self-esteem and overall well-being** (Knight 2009; Whitebread 2017).

- Play supports children's **monolingual and multilingual language and literacy development** (Cavanaugh et al. 2017; Christie 1995; Howes and Wishard 2004; Pyle, Prioletta, and Poliszczuk 2018; Saracho and Spodek 2006; Wishard Guerra 2016).

- Play is a natural context for advancing children's **physical development**, including muscle development, coordination, and obesity prevention (Marcon 2003).

Consider a common scene in early childhood: young children playing with wooden unit blocks. What are children learning through block play, and how does this type of play support development?

What Are Children Learning When They Play with Wooden Blocks?

Mathematical and Scientific Thinking

- The concepts of whole and part, balance, stability, and gravity
- Spatial understanding, including vertical, horizontal, and "bridging space" in which children perceive the space between two blocks, then choose an appropriately sized block to fit into that space
- Equivalencies among the differently sized block units and any measurements of length, height, or depth of structure
- Cause and effect
- Dispositions of experimentation, curiosity, and open-mindedness
- Quantity, counting, number concepts
- Weight (heavy and light)
- Sequence and pattern
- Classification
- Mathematical and scientific language and vocabulary

Language and Literacy

- Concept development
- Expressive language (the ability to put thoughts into words and sentences) and receptive language (the ability to understand the words, sentences, and meaning of what others say or what is read)
- Emergent writing (e.g., signs that indicate "Do Not Disturb" or "Airport")

Physical Skills

- Muscle strength
- Coordination
- Balance

Social Skills

- Competence, confidence, decision-making, agency
- Communicating (including listening and expressing oneself, exchanging ideas, and building vocabulary through social interactions)
- Planning
- Cooperating with others
- Compromise
- Problem solving
- Responsibility, forgiveness, and relationship repair (e.g., after a block structure is accidentally knocked over)

Play helps children to process and heal from stressful and traumatic experiences they observe in their communities or experience directly. Play is a natural language for children and a window into their internal worlds, especially their concerns and understanding of all that is happening around them. In fact, children often do not talk about their concerns and feelings—they play them out. Through play, children tell stories about what they observe and learn about the world around them, their past experiences, the feelings associated with these experiences, and how they feel about themselves and the types of support they need and desire from others (Fromberg and Bergen 2006).

Play gives children a way to express aspects of their inner world that may be too frightening

to express directly. When children are able to use objects to represent other objects, or play out a complex scenario, they are able to communicate to adults what they are taking in and comprehending. Through play, children can change and invert their reality. For example, a child who lost a parent to cancer might engage in repeated cycles of search and reunion play, in which a baby lion is searching for her mother in the forest and is unable to find her, or a child whose family lost their home in a fire might act out the role of firefighter who rescues others from burning buildings and brings them to safety. By acting out a situation symbolically through play, releasing and expressing their feelings in the context of play, returning to the event over and over, and often changing or reversing the outcome, children can move toward inner resolution of the stressful or traumatic experience and find a way to cope with or adjust to the problem in real life. Play allows children to express themselves, resolve conflicts, and liberate themselves from overwhelming feelings.

Despite all of the benefits of play, play is disappearing in early childhood and in elementary schools across the United States.

Research over the last few decades documents opportunities for children to engage in play at home and at school significantly declining in the US (Elkind 2007; Ginsburg et al. 2007; Hirsh-Pasek and Golinkoff 2003; Hirsh-Pasek et al. 2009; Miller and Almon 2009; Veitch et al. 2006). In their widely circulated *Crisis in the Kindergarten*, Ed Miller and Joan Almon report results of nine studies completed between 2007 and 2009 that provide evidence that among 254 kindergarten classrooms in New York City and Los Angeles, "play in all its forms but especially open-ended child-initiated play [was] a minor activity, if not completely eliminated" from the curriculum (2009, 18). The report concludes that children's kindergarten experiences had changed significantly (Miller and Almon 2009, 1):

> Kindergarten has changed radically in the last two decades. Children now spend far more time being taught and tested on literacy and math skills than they do learning through play and exploration, exercising their bodies, and using their imaginations. Many kindergartens use

highly prescriptive curricula geared to new state standards and linked to standardized tests. In an increasing number of kindergartens, teachers must follow scripts from which they may not deviate. **These practices, which are not well grounded in research, violate long-established principles of child development and good teaching. It is increasingly clear that they are compromising both children's health and their long-term prospects for success in school** (emphasis added).

Mirroring these findings, a 2010 Gallup poll surveyed the state of recess in 1,951 schools across the nation and found that although 92 percent of the schools reported having recess, more than one-half had less than 30 minutes of recess per day. These findings suggest that school-age children have very little time to engage in open-ended free play, despite two-thirds of the principals surveyed reporting that students were more attentive after recess and 80 percent believing that recess improved children's academic achievement (Robert Wood Johnson Foundation 2010).

Children impacted by poverty are even more at risk for reductions in access to and opportunities for child-initiated play; they are not only more likely to attend underresourced districts under pressure to increase test scores but are also more likely to live in neighborhoods with fewer environments perceived by adults as safe for children's play (Milteer et al. 2012). Souto-Manning highlights how access to a playful childhood has become racialized and inequitable in the United States (2017). For example, the right to play is often taken away from young Black boys when their play is disproportionally deemed inappropriate, seen as a problem, or even criminalized. Black boys are routinely perceived to be significantly older than they actually are and less innocent when compared to white boys of the same age (Gilliam 2016; Goff et al. 2014; Okonofua and Eberhardt 2015). And children who experience opportunity gaps—a demographic group with a higher percentage of children of color—are more often given remedial education that is passive and denies them the opportunity to learn through play.

Concern about the significant loss of play in children's lives has led the American Academy of Pediatrics (AAP) to release three reports (see the box below) urging families, school systems, and communities to reverse this trend and ensure play is protected for the current and future well-being of children (Ginsburg et al. 2007; Milteer et al. 2012).

The AAP recommends 60 minutes of physical activity for schoolchildren per day; the average time allotted for recess in elementary schools in the US is approximately 20 minutes (Jarrett 2013). The AAP has published three reports describing the importance of play for young children:

- "The Power of Play: A Pediatric Role in Enhancing Development in Young Children" (Yogman et al. 2018) provides information about the benefits of play, encourages pediatricians to write a prescription for play at well-child visits, and describes the importance of playful learning for the promotion of healthy child development.

- "The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent–Child Bond: Focus on Children in Poverty" (Milteer et al. 2012) describes how children who live in poverty often face socioeconomic obstacles that impede their rights to have playtime, thus affecting their healthy social–emotional development. The report advocates recognition by parents, educators, and pediatricians of the importance of lifelong benefits that children gain from play, especially children furthest from opportunity.

- "The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent–Child Bonds" (Ginsburg et al. 2007) describes why play is essential to children's development and addresses a variety of factors that have reduced play at home and in school.

The reduction of child-initiated play in young children's lives has developed over many decades. The AAP, historians of play, and early education researchers have described several factors contributing to this change (Ginsburg et al. 2007; Nicolopoulou 2010):

- The number of multigenerational households has decreased along with an increase in single head of household and two-parent working families. These trends have resulted in an **increase in children's participation in child care and other settings with close adult supervision** (e.g., organized after-school activities and enrichment experiences).

- **Hurried and pressured lifestyles** have increased, along with a move toward a "professionalization of parenthood" in which social norms of effective parenting emphasize standards of efficiency and productivity in the time parents spend with their children, as seen in parents' perceptions that they need to "actively build every skill and aptitude their child might need from the earliest ages." This trend has led to children being overscheduled with structured activities versus free playtime.

- Public schooling has prioritized academics (literacy, mathematical thinking, and closing achievement gaps) and increased emphasis on **narrow definitions of kindergarten readiness** and accountability over children's play. Policies introduced by the No Child Left Behind Act of 2001, that are still in effect today, rely heavily on high-stakes standardized testing.

- The growth of **technology and digital devices** in young children's lives has led to their spending more time in front of screens for entertainment and less time physically playing with other children.

- Children spend less time in nature and playing outdoors. A rise in violence and environmental hazards has increased **parents' fears about safety in public outdoor spaces**.

- Through the narrowing of the curriculum and an emphasis on assessment of individuals in public education, schools offer **fewer opportunities for children to focus on activities that promote community, democracy, and self-expression**—all intimately related to learning through play.

- **Early childhood education teachers and administrators may lack training** on what is required to provide high-quality play-based programs. Consequently, few child care providers have sufficient expertise in effectively planning for, and supporting, play-based learning in systems demanding data-driven accountability and continuous quality improvement.

Play-based learning is a culturally relevant approach to learning that allows for individualization and builds on the social and cultural strengths each child brings with them to the classroom. When play is removed from early childhood classrooms, children from diverse backgrounds, especially children impacted by poverty, experience the most significant adverse consequences, including negative impacts on their social–emotional development (Milteer et al. 2012).

Myths About Play

In addition to the factors listed above that account for the decline in children's play, many myths and misunderstandings about play are circulated in the media and heard in conversations with teachers, administrators, and families. Despite growing evidence that identifies play-based learning as the optimal way to teach young children, many key stakeholders, such as parents and administrators, often express concerns to teachers about play-based education. Many of the concerns are based in fears that children will not be successful in their future and will not learn as much as they would with other, more direct instructional methods.

Common Myths About Play That Prevent Teachers from Embracing Play-Based Learning

- MYTH: When children play, they are not learning.

- MYTH: If I do not teach them, they will not learn. If children are playing, I am not teaching.

- MYTH: Children who are viewed as behind their peers academically do not have time to play.

- MYTH: Play is only for very young children. Elementary school children no longer need to play.

In order to respond effectively to these well-intentioned but mistaken beliefs about children's play, it is essential to understand and know how to explain how play supports learning. The following examples of concerns and myths about play-based learning include approaches teachers can take to effectively address them:

→ MYTH: **When children play, they are not learning.** Teachers can use a couple of approaches to dispel this myth. One approach is to share or reference empirical research to describe the important role of play in children's learning and development. Researchers studying the impact of play-based methods on learning have shown gains in children's development across all domains. However, sometimes even more convincing is explicit documentation of this relationship through photography, notetaking, and presentations of children's growth and learning through play inquiry projects that make visible to the parent how their child is doing. Below are a few examples of this type of documentation.
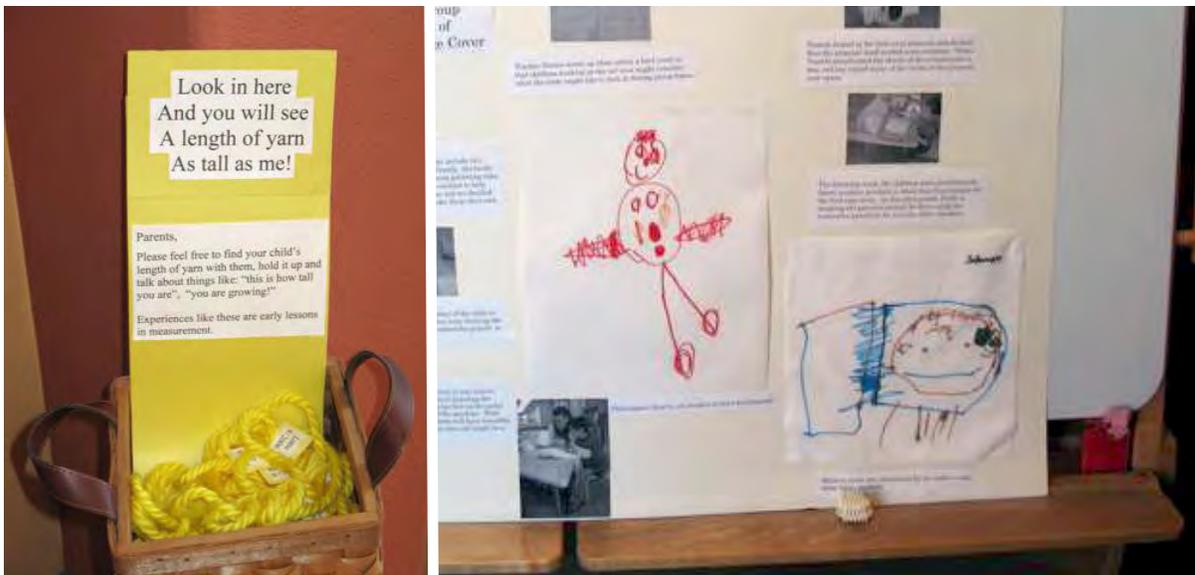
→ MYTH: **If I do not teach them, they will not learn.** If children are playing, I am not teaching. Using play-based learning does not mean that teachers are not teaching. Teachers play many roles that guide, scaffold, and direct children's learning in play-based programs. However, this teaching is often supportive or embedded in the children's play activities. Through careful observation and evaluation of children's thinking and learning, teachers can decide when children need more direct support and when they need time for free self-determined play to explore and discover. Furthermore, in most play-based learning settings there is a balance of free play, facilitated play, and adult-guided play (see chapter 3 for a discussion of the continuum of teacher roles in children's play). Teachers regularly document children's play activities and thus are able to help assess what and how children are learning.

- → MYTH: Children who are viewed as behind their peers academically do not have time to play. As mentioned previously, play is a child's right. When it is decided that some children do not benefit from play while other children do, play becomes a privilege, not a right. Access to learning through play is being limited for the children who already have the least access to playful learning opportunities—the very children who may need it the most. Taking play away from children who are already negatively affected by opportunity gaps results in furthering inequities and hindering children's well-being. It also fails to recognize that play equals learning for young children. For example, researchers have found that elementary school children with more recess time have greater progress in academic learning and better overall mental health than children who have fewer opportunities to play and less access to recess as part of their school day (Rhea and Rivchun 2018). Play-based learning is beneficial for the development of all children.

- → MYTH: Play is only for very young children. Elementary school children no longer need to play. Brown and Vaughan underscore the importance of play as an activity that has benefits throughout a person's entire life (2009). As children grow and develop, their play changes too. Older children's play becomes more intricate and challenging and, as play becomes more complex, children develop cognitively, physically, socially, and emotionally. A young child might benefit when learning mathematical thinking by playing a simple board game which requires counting game pieces with each spin of a wheel. In contrast, a second- or third-grade child will be challenged by a game of chess, which requires memory skills, using strategies, and problem solving. Children in transitional kindergarten and early elementary grades can greatly benefit from opportunities to learn through play—both child and teacher directed. As the reader will learn throughout this book, end-of-year goals for children in early elementary school can be supported in play-based classrooms (see the following box).

Transitional Kindergarten: End-of-Year Goals

Every One of these Skills is developed through Play!

Social–Emotional

These are skills that are practiced throughout life. Although most 5-year-olds are aware of and capable of these behaviors, most have not yet mastered them.

- **Identity of self:** Accurately compares self to others and displays a growing awareness of own thoughts and feelings.
- **Recognition of own skills and accomplishments:** Characterizes self positively in terms of ability or skills.
- **Expressions of empathy:** Uses words or actions to demonstrate concern for what others are feeling.
- **Impulse control:** Consistently uses a variety of socially accepted strategies to stop self from acting impulsively.
- **Taking turns:** Routinely proposes taking turns as a solution to conflicts over materials and equipment.
- **Following rules:** Understands basic rules and follows them routinely without requiring reminders; accepts that rules are important and necessary in daily life.
- **Awareness of diversity in self and others:** Demonstrates an understanding of inclusion and fairness through actions or words.
- **Relationships with adults:** Works cooperatively with an adult to plan and organize activities and to solve problems; is comfortable interacting with multiple adults in the classroom.
- **Cooperative play with peers:** Leads or participates in planning cooperative play with others.
- **Sociodramatic play:** Takes a role in a play situation with other children in which they have agreed on roles and how they will play.
- **Friendships with peers:** Prefers to play with a particular child who expresses a mutual preference.

- **Conflict negotiation:** Considers the needs or interests of another child when there is a conflict and accepts or suggests mutually acceptable solutions.
- **Shared use of space and materials:** Without adult prompting, invites others to share materials or space.

Motor Development

- **Large motor movement:** Participates in extended or integrated physical activities. Students should be able to hop, climb on a jungle gym, run, change directions quickly, and create their own dance steps to music. Students should be able to side step, skip, throw, catch, and kick with some accuracy.
- **Balance:** Coordinates multiple movements involving balance. Students should be able to hop on one foot four or five times, walk on a low balance beam, run and kick a ball, and balance a beanbag on their heads.
- **Fine motor skills:** Shows increasing refinement and detail in fine motor movements requiring finger strength or control. Students should be able to hold a pencil correctly, copy letters or simple shapes, use scissors to cut out an object, and string beads.

Work Habits

- **Following increasingly complex directions:** Shows understanding of three-step instructions and requests that are about a new or unfamiliar situation. Example: "Please fold your paper in half, open it up, and put a dot in the middle of it."
- **Engagement and persistence:** Returns to challenging or multistep activities. Example: Attempts a new activity and works at it repeatedly until successful. Puts effort into getting better without giving up.
- **Problem solving:** Tries out a set of actions to develop a strategy for solving problems. Example: Starts building a tower with a plan in mind. If it does not work, tries again in a different way until successful. When there is no pencil available at the table, can think of multiple ways to get one without seeking adult help.

- **Curiosity and initiative:** Puts materials or objects together in new and inventive ways to experiment or to create something. Example: Assembles shapes to form new objects during formal or informal activities. Asks questions about how to play a new game and tries to play. Asks how things work.

Source: Transitional Kindergarten Teachers, Elk Grove Unified School District. Inspired by California's Preschool Foundations and Frameworks and State Kindergarten Standards.

The many reasons for the lack of play in early education may create the impression that implementing play-based learning is too difficult a task. Although there are real challenges to address, they are not insurmountable!

There is a need for early childhood teachers, administrators, and program staff to have access to factual information about play and play-based learning. With this goal in mind, this book was written specifically to provide early childhood teachers and program leaders information on

- how play supports young children's learning and development;
- how educators can optimally support children's play;
- how to advocate for support from administrators and families; and
- the many roles adults and peers can have in children's play.

Key Take-Aways for the Early Childhood Classroom

- Play is a human right for all children.

- Play-based learning is the optimal approach to support young children's learning and development.

- Play can take many different forms and serve many different functions. Children should have many opportunities to engage in free play, be supported by adults through guided play, and have limited requirements to participate in teacher-directed playful activities.

- Play supports children in processing and healing from stressful and traumatic experiences they observe in their communities or experience directly.

- Despite all of the benefits of play, play is disappearing in early childhood and in elementary schools across the United States.

- Many myths about play prevent teachers from embracing play-based learning. A substantial research base that highlights the importance of play provides teachers with accurate information to combat these myths.

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The Critical Role of Play in Children's Learning and Development

This chapter:

- Describes the image of the child in play-based learning programs
- Introduces important theories with contemporary relevance for understanding children's play
- Introduces different types of children's play
- Includes vignettes to demonstrate how play is one of the most natural forms of integrated learning throughout the early childhood years

The Image of the Child

One of the guiding principles of play-based learning focuses on the image of the child. But what does "image of the child" mean? This term refers to cultural understandings and assumptions about the role of children in education and society. Every culture has its own set of expectations and beliefs about children's learning—beliefs which vary about what children are capable of, what motivates them, and goals for their development—and assumptions about how much agency or autonomy in decision-making and actions children should have (Rogoff 2003). These expectations, in turn, influence the types of practices and settings adults create to support children's learning—whether they include formal schooling, observation of or participation in adult activities, or play, which is the focus of this book.

The image of the child is influenced by social connections, cultural and family beliefs, and the historical context of communities (Martalock 2012). For example, Loris Malaguzzi, who founded the Reggio Emilia approach to education, was influenced by his own cultural background, having lived in Italy during World War II. After the war, following an increased focus on democracy and collectivism (the focus on the group over an individual orientation) in Italy, he developed a view of children as having rights rather than needs. He describes children as competent, curious, powerful, and intentional. His philosophy values the role of play in development, and he fought explicitly against the idea that learning and play were separate, illustrated here in an excerpt from his poem "The Hundred Languages of Children." (See chapter 3 for the complete poem.)

They tell the child:
that work and play
reality and fantasy
science and imagination
sky and earth
reason and dream
are things
that do not belong together. …

[In response] The child says:
No way.

(Source: Edwards, Gandini, and Forman 1998, 3)

Why does the image of the child matter in play-based learning? As Malaguzzi suggests:

> There are hundreds of different images of the child. Each one of you has inside yourself an image of the child that directs you as you begin to relate to a child. This theory within you pushes you to behave in certain ways; it orients you as you talk to the child, listen to the child, observe the child. It is very difficult for you to act contrary to this internal image. (Malaguzzi 1994)

Thus, the image adults have of children affects how they treat children and how they design educational environments. Curricula, instructional methods, and assessment practices are all rooted in different cultural assumptions, values, and beliefs about the image of the child, how children learn and develop, and the role of adults and peers in children's learning and development.

In her TED Talk "What Do Babies Think?" (2011) and her *Scientific American* article "How Babies Think" (2010), scholar Alison Gopnik outlines how researchers and others thought of babies and young children in the past and how, based on new research, those ideas have changed. She explains that, only 30 years ago, the majority of psychologists, philosophers, and psychiatrists thought that babies and young children were irrational (not logical or reasonable), egocentric (only able to perceive the concrete "here and now"—unable to understand cause and effect; imagine the feelings, desires, or experiences of other people; or appreciate the difference between reality and fantasy), and amoral (lacking a moral sensibility, unconcerned about the rightness or wrongness of things). This image of the child projected children as "defective adults" (Gopnik 2010, 76).

Recent developmental research examining infants, toddlers, and preschoolers has revealed these assumptions to be inaccurate. There is now ample evidence to illustrate that young children think and learn a lot like scientists! They engage in inquiry and make meaning as they investigate their ideas in their play. They create hypotheses and develop theories about the world of people and things as they actively explore and experiment to find the answers to their questions about how the world around them works (Gopnik and Seiver 2009).

Gopnik describes how babies' understanding and approach to the world can be advantageous to their learning; her research suggests that infants and young children are more open to ideas, new perspectives, and possibilities than adults are—unlike adults, children are not constrained by planning or decision-making (2010). Her image of the child, therefore, conceives of them as both flexible and intelligent. Play-based learning requires adoption of this image so that children are seen and treated as valuable and capable and having many strengths.

◆ Teacher Reflection:

An essential first step for teachers interested in creating engaging play-based learning environments for young children is to reflect upon their image of a child. Following are some questions teachers can use to guide reflection:

- When you think about infants, what do you think they are capable of doing?

- What motivates them to learn?

- How much agency or autonomy in decision-making and actions do you believe they should have?

- How would you answer these questions for toddlers? For preschoolers? School-age children?

- Does your image of the child assume that every child is strong and capable?

Imagine adults thinking of children as not knowing how to learn.

- How would they design educational learning opportunities for them?

Now imagine adults having an image of babies and young children as having the capabilities of scientists.

- What might their learning opportunities look like?

Implicit bias and the image of the child. The National Black Child Development Institute, among other agencies, educators, and researchers, has called attention to the significant evidence that Black boys in the US are overwhelmingly perceived through a deficit lens, rather than a lens that honors their strengths and capacities (Delpit 2006; James and Iruka 2018). In response, the Council of the Great City Schools created a blueprint for schools with the following first step (2012, 22):

Articulate in the school district's mission statement a clear belief that all students, including African American males, are valued and can achieve at the highest levels.

How teachers see children matters to the child and to their families and communities. This, in turn, can have a major impact on a child's life. The following vignette demonstrates how two teachers interpret a kindergarten-age boy's behavior differently, based on their image of him.

Kevin's kindergarten teacher shares concerns with his former preschool teacher about his behavior. The kindergarten teacher states that Kevin was neither able to stand in line when he and his classmates walked down the hall nor sit for long during learning time. The preschool teacher responds to this information by asking the following questions:

- What does Kevin's day look like?
- Is there time for him to move and play throughout the day in a way that is integrated into the curriculum (e.g., not just limited to recess)?
- Are there visual cues for him to anticipate events (e.g., a visual schedule)?
- Are directions given in English only, or are they also given in his home language?

In this scenario, Kevin's kindergarten teacher sees the image of Kevin much like Alison Gopnik describes how researchers saw children in the past—through a deficit perspective as passive learners needing help. In contrast, the questions Kevin's preschool teacher asks provide insight into how the teacher views him—as someone capable of understanding directions and actively learning, and as having the strength of being bilingual. Notice how the preschool teacher also recognized the need for Kevin to have play in his day. **The teacher's image of Kevin is one of a child who thrives by moving and playing.** The next section describes how the play of children is closely linked to their development and learning.

Understanding Children's Development and Learning from Diverse Scientific and Cultural Perspectives

Play-based learning requires a deep understanding of the unique ways in which children develop, learn, and play based on their individual attributes and the diverse families, cultures, and communities in which they live. **When educators and researchers state that play supports development and learning, they recognize that development and learning are two different concepts.**

- **Development** generally refers to physical, cognitive, or psychological changes over time. These changes can be observed in different areas, or domains, of growth: physical and motor development, cognitive development, language development, and social–emotional development.

- **Learning** refers to the process of observing, having experiences, or being instructed in a process that results in new ideas and responses to the world.

To better understand the relationships between children's play, development, and learning, different frameworks developed by theorists and researchers can be helpful. Though these frameworks can be useful for teachers when observing and documenting children's play, three cautions are important to note:

- Each child develops at a different rate; a child's play should not be assumed to be easily categorized based on chronological age.

- Many factors influence how children play (geography, culture, political environment, individual differences, and more). Play is strongly influenced by context.

- These are not the only lenses for understanding children's play.

Vygotsky: Play as a Leading Force in Children's Development

Lev Vygotsky, a classical developmental theorist, suggests that **learning leads development**. For Vygotsky, play is not just a reflection of a child's stage of biological development, it is also the pathway by which children learn (Vygotsky 1978; Wertsch 1985). Vygotsky proposes

that pretend play drives children's learning. The type of play in which, for example, a child role-plays or pretends that a block is a car, helps the child develop abstract and symbolic thought. Vygotsky differs from Piaget, an important developmental psychologist who identified and described broad stages of cognitive development. Piaget focused on the child's individual exploration as the source of learning, whereas Vygotsky focused on the role of social interactions between the child and social partners, specifically those who are more knowledgeable such as older peers, parents, or teachers. The role of these partners is to **scaffold** children's learning (provide support to help a child attain a skill, strengthen understanding, and increase independence), including facilitating play.

Vygotsky describes play as a leading force in children's cognitive development. Why?

- **Pretend play frees a child's thinking from concrete experience, creating a foundation for abstract thinking and symbolizing.** When children create an imaginary situation, they learn to act not just in response to the objects and experiences they see right in front of them but also in response to their internal ideas, or the meaning of a situation. In pretend play, a child can see or perceive one thing (e.g., a stick) but act differently in relation to what is seen. In this way, children learn they can think about ideas and act independently of what they see (e.g., a stick can become a doll because the child is not limited to the perceptual features of the stick and can imagine the idea of "doll" in playing with the stick).

- **Pretend play supports children's ability to manage their own behavior and emotions.** As children mature, and more rules and routines are expected, fantasy play expands. Vygotsky believed a central function of play for children is learning self-restraint. As children learn to follow set social rules in imaginary play (e.g., following the social norms for behaviors that reflect "what a baby does," or following the rules of bedtime behavior when pretending to sleep in a sociodramatic scenario), they learn to understand the norms and expectations of their families and communities and to behave in ways that are expected of them in the real world. Furthermore, play helps children to **manage their "unrealizable desires."** That is, when children want something that they cannot have immediately or at all

(e.g., when a child asks for a cookie before dinner and the parent says "no"), they can invert reality and make their wish come true within the context of a pretend play frame (e.g., having cookies as part of the menu during a pretend tea party). Pretend play emerges in the toddler years, just as children are learning that they must adhere to certain social norms and expected behaviors. The fact that pretend play requires children to imagine a situation governed by rules is the key to its essential role in children's development. Pretending supports children's ability to build the capacity to reduce their impulsive and reactive behavior as they develop a greater capacity for flexible self-regulated actions.

- Vygotsky also believed that pretend play (or what he called fantasy play) creates a **zone of proximal development** (ZPD) in the child. The ZPD is the distance between what a child is capable of doing autonomously and what a child can accomplish with guidance and support from a more capable peer or adult (Vygotsky 1978). **Play creates a ZPD for young children because they are capable of more mature and sophisticated thinking and behavior when they are engaged in a pretend play context** (e.g., self-regulating their emotions and behavior, inventing new symbolic meanings, working collaboratively). Teachers might be surprised to see that a child who can stay still for long periods of time when hiding from the "monsters" on the play yard is the same child who struggles to display self-regulation while waiting in line for lunch. The very act of participating in fantasy play, Vygotsky described, creates a ZPD for a child. He suggested that in play a child is "a head taller" than themself. He explains (Vygotsky 1967, 16; Vygotsky 1978):

> In play a child is always above his average age, above his daily behavior; in play it is as though he were a head taller than himself. As in the focus of a magnifying glass, play contains all

developmental tendencies in a condensed form; in play it is as though the child were trying to jump above the level of his normal behavior.

◆ **Teacher Reflection:**

- How is play creating a ZPD for the children in your care? That is, how is play supporting the children in your classroom to be a "head taller" than themselves?

- Do you see play supporting children in becoming more mature and sophisticated in their verbal abilities? Self-regulation of emotions or behavior? Focus and attention? Problem solving and creativity? Building second language skills or cultural repertoires?

- Discuss some examples of play creating a ZPD with a colleague, supervisor, or family member.

The fact that pretend play creates a ZPD for young children and enhances their development is an important talking point that educators and researchers use when advocating for the need for play to remain in early educational settings.

How Play Supports the Developmental Progression for Young Children in Learning to Symbolize

Teachers find that, as children develop, they are able to use objects that look increasingly different from the object they symbolize. For example, at the beginning of the year, Leticia played "the mom" and talked into the toy phone in the housekeeping area. Her teachers observed that later, in early spring, she used different objects for a phone, including a red block and, outdoors, a round stone.

When children use an object to represent another object (i.e., a red block for a phone), their relationship to reality is dramatically changed. The red block becomes a pivot for separating the meaning of the word "phone" from a real phone. It is very difficult for young children to learn to symbolize, that is, to create words or thoughts to represent a real object or person, and they do so very slowly over time.

- In the earliest stage of symbolic thinking, young toddlers use only realistic objects in their pretend play. This approach is seen with a young child pretending to talk into a plastic telephone. At this early stage in development, children need pivots that closely resemble the objects they symbolize, such as a toy phone to stand in for a real phone.

- Later, at around age two, children will begin to use less realistic pivots (e.g., a block as a pretend phone). At this stage, children are able to use objects that do not look like the object they stand for, as when Leticia uses a block to symbolize a phone. At this stage, the same object can symbolize different things. For example, one day Leticia might pretend that a block is a phone and the next day that the same block is an ice cream cone.

- Then at around three years of age, children learn to imagine objects and events without any support pivots from the real world. A preschool teacher might observe a young child say to her play partner, "I'm going to call the bakery," and pretend to hold her hand in the shape of a phone and make the phone call. In this stage, the child has completely disconnected the word "phone" from the actual tangible object of a phone. In effect, the child understands that she can use an object (in this case her hand) to symbolize a phone. This type of pretend play—when children no longer need pivots to support their imagination—prepares children for later abstract thinking (e.g., mathematical thinking and formulas) and the use of symbols for literacy (e.g., using different combinations of lines on a page to represent letters and words in a book).

Leong and Bodrova created a framework that teachers can use to identify the developmental sequence of make-believe play for young children (2012). Teachers can use this framework to identify the different levels of scaffolding they can provide to support children's development of skills as they increase the complexity of their make-believe play (see table 2).

Table 2. Five Stages in a Child's Make-Believe Play

Five Stages in a Child's Make-Believe Play	Stage 1: First Scripts	Stage 2: Roles in Action	Stage 3: Roles with Rules and Beginning Scenarios	Stage 4: Matured Roles, Planned Scenarios, and Symbolic Props	Stage 5: Dramatization, Multiple Themes, Multiple Roles, and Director's Play
Plan	Does not plan during play.	Does not plan during play.	Plans roles. Actions are named prior to play.	Plans each scenario in advance.	Plans elaborate themes and scenarios, and complex roles. Spends more time planning than acting out the scenario.
Roles	Does not have roles.	Acts first and then decides on roles.	Has roles with rules that can be violated.	Has complex, multiple roles.	Can play more than one role at a time. Roles have social relationships.
Props	Plays with objects as objects.	Plays with objects as props. Actions with a prop result in a role.	Needs a prop for a role.	Chooses symbolic and pretend props.	Can pretend rather than actually have a prop. Does not need a prop to stay in the role. Objects can have roles.
Extended Time Frame	Explores objects but not play scenarios.	Creates scenarios that last a few minutes.	Creates scenarios that last 10–15 minutes.	Creates scenarios that last 60 minutes or longer. With support can create scenarios that last for several days.	Creates scenarios that last all day and across several days. Play can be interrupted and restarted.
Language	Uses little language.	Uses language to describe actions.	Uses language to describe roles and actions.	Uses language to describe roles and actions. Uses role speech.	Uses language to delineate the scenario, roles, and action. Book language is incorporated into role speech.
Scenario	Does not create a scenario. Can copy what the teacher does and says or will follow the teacher's directions if script is simple and repetitive.	Creates a scenario that is stereotypical, with limited behaviors. Can incorporate modeled roles and actions into play, with support.	Plays familiar scripts fully. Accepts new script ideas.	Plays a series of coordinated scenarios that change in response to previous ones or the desires of players. Describes unfolding scenario, roles, and actions.	Plays a series of coordinated scenarios that change in response to previous ones or the desires of players. Uses themes from stories and literature.

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Table 2. Five Stages in a Child's Make-Believe Play *(continued)*

Stage 1: **Object-oriented pretend actions.** For example, a child playing with a toy car while making "vroom-vroom" sounds.

Stage 2: **Roles in action.** For example, a child walking back and forth in high heels and, when asked, labels her actions as "playing mommy."

Stage 3: **Roles with rules and beginning scenarios.** Children begin to coordinate their actions with play partners, making sure that the actions go with the chosen roles of the player. At this stage, it is common to see children correcting a peer's behavior if the actions do not match the role they are playing. For example, a child might comment if a patient starts playing with the doctor's stethoscope.

Stage 4: **Multiple pretend actions.** Children's actions are consistent with their roles, and they engage in complex scenarios.

Stage 5: **Planning and negotiating pretend actions.** At this stage, children can play multiple roles without having physical partners. They both "direct" and "act out" these roles with stuffed animals or imaginary partners.

(Source: Leong and Bedrova 2012, 30)

◆ **Teacher Reflection:**

- **Step 1:** Observe a child in your classroom engaged in pretend play.

- **Step 2:** Choose one row from the Plan, Roles, Props, Extended Time Frame, Language, Scenario framework in table 2 and see if you can identify the developmental skills the child is displaying in play (e.g., extended time frame).

- **Step 3:** Based on the developmental sequence described above, identify one way you can scaffold the child's play to deepen or extend it. For example, you observe a child creating a scenario that lasts 10–15 minutes. You take a photo of the play as a visual scaffold to share with the child the following day with an open-ended request: "Yesterday, you were pretending to be a veterinarian who helped sick and injured animals. Is your clinic open again today or do you have a different plan for your play this morning?"

Understanding of children's play and how it supports learning is deepened when the context in which children play, grow, and learn is considered. As play researchers Frost, Wortham, and Reifel note, "…children's play is a multifaceted human activity that is difficult to understand from any one perspective. Much of children's play around the world can be understood in terms of how play contributes to child socialization within a culture, as well as how culture shapes play" (2012, 237). All children learn in nested contexts with many factors, for example, geography, historical context, cultural beliefs and routines, family values and circumstances, languages spoken, and other factors influencing when and how children play, as well as the types of play they engage in and how play supports their learning and development.

Barbara Rogoff's Sociocultural Theory of Development

Rogoff's contemporary theory of sociocultural development highlights the importance of the environment in children's learning and takes a closer look at how cultural beliefs and routines influence children's learning (2003). Her research on children growing up in the non-Western schooling culture[4] of San Pedro, Guatemala reveals that they are often raised in environments with multiple children and adults in the household as social partners. This experience leads to children's ability to learn from observing multiple ongoing interactions at once. Children growing up in Western schooling cultures (in Salt Lake City, Utah in Rogoff's research) are less likely to be in situations with multiple differently aged social partners at home and are less likely to experience learning situations that do not involve them directly. Instead, children in Western schooling cultures often have adults who teach them directly.

These differences in children's cultures can shape how children learn in early childhood programs, especially if the school, center, or family child

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4   Rogoff describes Western-style schooling as a top-down model of education in which an adult organizes the format and content of children's learning experiences. She contrasts this with what she describes as non-Western informal learning cultures in which children may learn from observing and participating in ongoing community and family activities (Rogoff et al. 2016).

care home environment does not match the type of social environment in which children are being raised (Mejía-Arauz et al. 2007; Rogoff 2003). The following example illustrates how these sociocultural factors influence young children's play.

Vera, age four and a half, is growing up in a close-knit neighborhood with her large extended family nearby. In Vera's household, there are often many other children and adults around. As a result, Vera spends little time one-on-one with a parent. Instead, Vera observes what is happening around her, and she is able to attend to and learn from multiple activities and people at once. Adults in Vera's family and community do not see their role as participants in children's play. Instead, Vera plays with the other children in her neighborhood. The older children often take responsibility for looking after the younger children. When Vera first began school as a kindergartner, the teacher, Marta, expected children to sit in a circle and pay attention to the teacher's directions—tracking her visually and mimicking the sounds she made auditorily—to learn a song. Vera's classmates, most of whom had attended preschool and pre-K, sat still and watched the teacher. Vera continued to watch other children around her during circle time instead of the teacher. As a result, Marta believed Vera was unfocused and was concerned about her behavior. At the end of the day, the teacher planned to talk to Vera's parents about her ability to pay attention and focus at school. However, when her parents came in, Vera surprised Marta by singing the entire song from circle time, while putting on her shoes. Through reflecting on her teaching practice, Marta realized that she had made some inaccurate and deficit-based assumptions about Vera. Marta, who wants to be a responsive and caring teacher for all of the children in her classroom, committed herself to learning more about Vera's strengths, knowledge, capacities, and preferred methods of learning. This, she understood, would require observing Vera over time engaged in various classroom activities as well as inviting Vera's parents to share information about their daughter and what they know about her learning experiences outside of school. Right away, Marta began to notice how often Vera would quietly observe others and then model speech and behaviors shortly afterward.

Teacher Reflection:

- How did Vera's behavior relate to the idea of multiple pathways to learning?
- What is the role of play in Vera's community?
- How can Marta meet Vera's needs as well as those of her classmates?
- What might Marta talk about with Vera's parents?
- How can Marta reflect on the assumptions she made about Vera, and how can Marta develop practices to reduce assumptions in the future?

Cultural Variations in Children's Play

Siwoo, a five-year-old kindergartner, lives with his mother in an apartment in a large urban area. His mother is an artist, and their home also functions as an art studio for her work. Siwoo is surrounded by a variety of painting supplies and materials. He is allowed to use them like his mother does. They enjoy painting together quietly while they listen to music. When they are not creating art at home, Siwoo and his mother like to walk to the local art museum to see the exhibitions or have picnics in the park and watch people walk by.

Patrick, also five years old, lives in a rural area near a small town with his four brothers, mother, and father. Patrick's brothers are older and play sports at school, including football and baseball. He likes to practice throwing and catching a ball with his brothers in the yard. They are often known to get too loud and roughhouse. On weekends after watching a sporting event, Patrick and his family get together with their large extended family where he runs around the yard with his multiple cousins playing chase games or recreating the highlights of the sporting event of the day.

The children in these two examples play in very different ways. Each is influenced by their family, the community resources and activities available to them, and the materials they can access. These examples illustrate some of the differences in the sizes of their families and access to play with others.

For instance, Siwoo is accustomed to being the only child, playing with his mother, and interacting more with other adults than with same-age peers. His play is slightly calmer and more sedentary, and his painting allows him to use his fine motor skills quite a bit. Patrick, by contrast, is used to having many children around, including his brothers and cousins. His family culture involves sports and large motor activities.

For each child these cultural variations might influence how they interact with other children in a school setting, what choices they make when given the chance to free play, and which skills are observed as their individual strengths.

In the following vignette, a young child's play reflects her experiences and memories of her first home.

Luciana is four years old and has newly arrived to Omaha, Nebraska from Colombia, South America. She often talks about her love of fruit, plants, and flowers—all things she saw in Colombia. In the spring, she was excited to notice flowers and plants in her new city. One day her preschool teacher brought in a book about flowers and shared it with the class. Luciana loved looking at the pictures. During playtime, Luciana brought paper to the table and began folding it in the shape of flowers.

Siwoo, Patrick, and Luciana each have a unique cultural background, family context, and individual interests. These factors and others influence the diverse motivations and expressions of young children's play.

Bronfenbrenner's Ecological Systems Theory of Children's Development

       Urie Bronfenbrenner's ecological systems theory frames an understanding of how **a child's development occurs in nested, multilayered contexts** (Bronfenbrenner 1977). According to his theory, children's development is influenced by many internal and external factors. Figure 2 presents how the relationships among these factors influence a child's development (Bronfenbrenner and Morris 2007). As this model relates to play, the factors in each layer influence if and how children play, the types of play they engage in, as well as the ways in which play is seen to support children's learning and development. These factors vary not only from child to child but also from moment to moment across a child's life span.

**Figure 2. Bronfenbrenner's Ecological Model
of Children's Development**
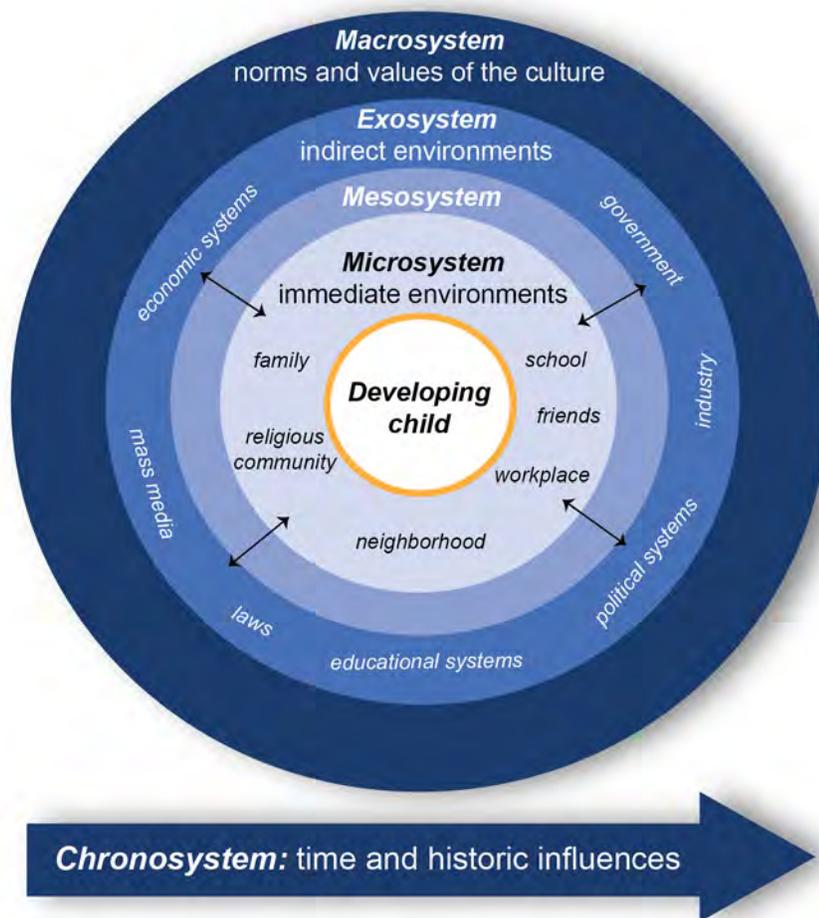
The center of the model is the individual child. Developmental studies have shown tremendous variation in young children's pathways to learning particular skills and acquiring knowledge. Much of this variation is shaped by the external layers seen in Bronfenbrenner's ecological model; however, the child's unique attributes also play a role. Important individual differences can include variations in **achievement of milestones** (e.g., crawling, walking, talking), unique **temperament** and personality, differences in **neurological** (brain) and **physical development** (e.g., abilities, disabilities), and **diverse experiences** (e.g., exposure to trauma). These individual differences influence children's development, behavior, and play.

The first layer of context around the child is the microsystem. The microsystem is the child's immediate environments (family, child care, neighborhood, etc.). It includes the people in these contexts who interact with the child, the child's relationships with peers and adults, and the environmental factors, such as pollutants or the quality of a preschool program, that affect the child. Children's learning, development, and play are affected by their families. For example, differences in the child's own family system, such as the number of children and adults in the home and the role of each in relation to the child, can influence how the child plays. A child who grows up with older siblings or peer-age family members may have more opportunities to engage in pretend play and negotiation during play. This experience may, in turn, relate to an earlier development of **theory of mind**, or the ability to take others' perspectives, which can facilitate sharing behaviors with peers at a school or within a early learning and care program.

The next layer is the mesosystem, which includes the connections among a child's immediate environments. An example of this is the relationship between the child's neighborhood and early learning and care program. A child's larger sociocultural mesosystem, including exposure to formal and informal learning environments (such as child care, museums, or parent–child classes) and community structure may also influence the form of play and access to different types of play activities. Children's experiences

with play—whether structured or unstructured, technology based or exclusive of technology, outdoor or indoor, supervised or unsupervised, or even same-age or mixed age—may differ based on their prior experiences in their home neighborhoods and communities. These variations in experience may lead to some children being more practiced and experienced with certain forms of play.

Other children, however, may not have had as many or as many diverse opportunities to play. It is important for stakeholders to understand the types of barriers and challenges to children's access to play based on socioeconomic and structural inequities, for example, parental stressors (e.g., housing, employment), resources (e.g., materials, play spaces such as backyards and parks), and differences in leisure time itself. At the institutional level, children's play may suffer from a lack of recess or after-school activities or from structural inequities; for example, for children who do not bring a lunch to school, having to spend time waiting in line for school lunch may lead to less access to playtime during lunch recess.

The exosystem includes the external environmental settings that indirectly affect a child's development. Educational laws affect how subsidized early childhood programs are funded, organized, and evaluated in ways that, in turn, influence children's learning and development and their opportunities to play. For example, federal regulations shape the curriculum and instruction for children enrolled in Head Start programs, and California's subsidized programs require the use of the Desired Results Developmental Profile (DRDP) as a child assessment. Another example is special education and civil rights laws that ensure access, participation, and supports related to educational opportunities and public accommodations for children and adults with disabilities.

The macrosystem represents the various cultural contexts that influence the environments a child is growing up in. Aspects of the macrosystem include the norms, values, beliefs, cultural routines, cultural practices, and systems of power that are privileged within a school, early childhood program, parental workplace, or community. The macrosystem has a significant impact on children's opportunities to play or experience play-based learning. Two examples of the impact of the macrosystem are the implicit bias and institutional racism that negatively affect children of color and conditions of poverty that negatively affect children's opportunities to play in their communities and in their early learning programs.

The chronosystem involves the significant historical and political events and transitions that take place over the course of the life span. For example, the No Child Left Behind Act of 2001 focused the country's attention on closing the achievement gap (now more commonly described as an opportunity gap). An unintended consequence was that many play-based early learning programs felt pressure to transform their curriculum to become more teacher directed and narrowly academic focused to raise test scores.

Bronfenbrenner's ecological model highlights the many diverse contexts that influence children's learning, development, and experiences with play. Embracing these differences can help increase understanding of play and encourage diverse forms of play in classrooms and community settings.

◆ **Teacher Reflection:**

Think of a child in your classroom or program. Consider the following:

- What are individual characteristics that influence the child's play, for example, temperament tendencies, background experiences, prior knowledge, developmental stage, interests, etc.? (individual)

- How does the child's family, housing status or neighborhood, medical care or therapeutic interventions, and child care or early learning program impact their opportunity to play and the types of play they are able to engage in? (microsystem)

- What, if any, political or historical events have occurred during the child's life span which may influence their access to and experiences with play, for example, trauma exposure, education policies impacting the state or community they reside in, etc.? (chronosystem)

Different Types of Children's Play

Play-based learning is an approach to curriculum and instruction that emphasizes the use of play to support children's learning across all domains of development. Because play is how children interact and explore the world, they need to experience different types of play for optimal support of development across social, emotional, physical, and cognitive domains. Stuart Brown, MD, the founder of the National Institute for Play, and other play scholars have classified play into several different types. Each of the following types of play provides distinct benefits for children (Brown and Vaughan 2009; Frost, Wortham, and Reifel 2012):

- **Attunement play.** Attunement play makes up the early building blocks for all forms of play. Through activities like peekaboo, parents begin to establish an emotional connection with their infant. It not only helps develop object permanence but also helps build awareness and fosters happiness.

- **Body play and movement (physical play).** Through body play and movement that often involves direct, physical contact, children develop a spatial understanding of themselves and the world around them. When children run, jump, and play games such as hide-and-seek and tag, they are engaging in physical play. Physical play offers a chance for children to develop muscle strength and coordination, and to exercise. Especially boisterous, large motor, and very physical activity is described as big body play (see text box below).

- **Object play.** In this type of play, children build and create things. Children explore objects, discover patterns, and solve problems to find what works and what does not (e.g., building with blocks, stuffed animals, balls).

- **Social play.** As children engage in social play, they develop the interpersonal skills that will help them have successful friendships and relationships as adults. They strengthen their communication skills, negotiation skills, and the ability to work through problems, take turns, share, cooperate, and compete. They develop an understanding of themselves and others as unique and different.

- **Imaginative and pretend play (fantasy play).** Children learn to create and imagine beyond their lived experiences during fantasy play. They assume adult roles and learn to think in abstract ways. Children stretch their imaginations and use new words and numbers to express ideas, imaginings, and historical concepts. Children can reenact situations, experiment with languages, and learn to express emotions during imaginative play.

- **Storytelling/narrative play.** Children learn about themselves, others, and the world around them through telling stories, acting out stories, and listening to others' stories. Stories can be fantasy or real or a combination of both.

- **Creative/expressive play.** Creative/expressive play supports children's expression of thoughts, feelings, and emotions through art, music, dance, and, when older, writing.

- **Virtual/digital play.** Play that involves the use of digital technologies, including video and computer games, internet sites, electronic toys, mobile technologies, cell phones, and tablets, and the creation of digital content (e.g., playing a video game that involves building with blocks, using digital apps, texting). Digital play is not always a solitary experience; instead, there is an increasing focus on social engagement in digital formats.

- **Language play.** Language play is seen when children playfully use rhymes, syllables, and songs; create new words and sounds; express silly sounds; and tell jokes. Language play may include more than one language as well as novel nonsense words that have meaning to specific children.

To learn more about the different types of play, watch the TED Talk video Play Is More Than Just Fun featuring Stuart Brown (Brown 2008).

Big Body Play

What is big body play?

> Rolling, running, climbing, chasing, pushing, banging, tagging, falling, tumbling, rough-and-tumble, [being] rowdy, roughhousing, horseplay, play-fighting. These are just some of the names that adults give to the boisterous, large motor, very physical activity that young children naturally seem to crave. All are forms of big body play—a play style that gives children the opportunities they need for optimum development across all domains from physical to cognitive and language to social and emotional. (Carlson 2011, 5)

Decades of research has established that big body play is associated with cognitive, social, emotional, and physical benefits for all children.

Why do so many teachers and programs limit or ban big body play?

The appropriateness and developmental benefits of big body play is often questioned by teachers and administrators. This is usually due to one or more of the following fears:

- **Fear of fighting.** There is a misconception that children's rough-and-tumble big body play is a form of fighting. This is not true. Although adults often struggle to understand the difference between rough-and-tumble play and fighting, children know. When children are engaged in big body play, teachers will see signs that they are happy and enjoying the play—smiles, laughter, choosing to join the play, and eagerly returning for more over and over.

  > Thirty years of research have shown us that rough-and-tumble play is distinctly different from real fighting. The difference lies in children's intentions and in the context of their play. In rough-and-tumble play, children's interactions are not intended to harm their playmates. Instead, their mutual goal is to extend the play for as long as possible … by contrast, in real fighting children use aggressive acts to coerce, to force their playmates to acquiesce to their desires. The context of the interaction is control. (Carlson 2011, 19)

- **Fear of escalation and injury.** Adults' most significant fear is for children's safety. They worry that children's big body play—even if children are enjoying it and nobody is getting hurt—will escalate and turn into fighting if allowed to continue. What does research say? Children's big body play leads to fighting and aggressive play less than 1% of the time and, when this happens, is often the result of one child misinterpreting the social cues (e.g., facial expression, tone of voice, body language, etc.) of another (Paquette et al. 2003; Smith, Smees, and Pellegrini 2004).

- **Fear that children will not be able to calm down.** Adults also fear that once children are engaged in big body play, they will not be able to calm down. Yet, just the opposite happens. Children who are able to engage in loud and active play are more capable of calm and focused attention afterward than children who lack these opportunities.

- **Fear of parents' reactions.** Most teachers are also concerned about parents' reactions to their children's participation in big body play. Providing information can help, for example, sending a letter to families that explains big body play and its many benefits.

How can big body play be included in early childhood programs in a safe and manageable way? Big body play will be most successful when simple, clear rules are cocreated by adults and children to guide where that type of play can take place and what children can and cannot do. Carlson provides an example of one early childhood program where adults and children created rules for rough-and-tumble play wrestling:

1. No hitting.
2. No pinching.
3. Hands below the neck and above the waist.
4. STOP as soon as the other person says or signals STOP.
5. No rough play while standing—kneeling only.
6. Rough play is optional—stop and leave when you want.

These rules were written on a poster board and placed near the designated rough-and-tumble play area in the classroom (Carlson 2011, 64).

Teachers, administrators, and families need information about big body play.

- To understand and effectively guide big body play, most teachers and administrators would benefit from professional development that emphasizes what big body play is, why it is beneficial, and how it can be monitored by adults to ensure children's safety.

- Additionally, parents and family members need to receive information about the benefits of big body play and how it is monitored and supported in the classroom. The program policy on big body play should be included in the family handbook.

Source: Carlson 2011

◆ **Teacher Reflection:**

- What types of play do children have access to in your program?
- How can you expand their access to new forms of play?

Play Is Where Integrated Learning Happens

[C]hildren from birth to five do not build or acquire their knowledge and skills in domain-specific categories one domain at a time. They relate to each learning experience as a whole experience. They naturally cross the boundaries of domains and simultaneously build concepts related to social–emotional development, science, mathematics, language, social science, the arts, physical development, and health. (CDE 2016b, 10)

When most adults think of teaching and learning by reflecting back on personal experiences as a student, they remember learning as organized by subject area with time dedicated to distinct areas. For example, the school day might have been divided into math class, English class, science class, physical education class, and so on. During each of those times, the teacher focused the student's attention on the task or skill at hand. However, observation of young children learning through play now reveals that knowledge, skills, and developmental domains are integrated and connected to multiple areas of learning. Also, learning through play is not limited to just one academic area, but builds the dispositions necessary for learning, including innovation, problem solving, persistence, risk-taking, looking at things from multiple perspectives, and creativity.

In *The Integrated Nature of Learning* (CDE 2016b), **play is described as the context in which integrated learning happens.** The following vignette demonstrates an example of the integrated nature of learning for a four-year-old girl playing in an outdoor classroom:

Serena is playing alone near a decaying log in a large outdoor area partially landscaped with wood chips and dirt. She is using a small spade to dig near the log. She seems determined to dig deeper and deeper—her hand is grasping the spade handle tightly and her face is getting red from the physical exertion. She says to no one in particular, "I am digging a hole for my pet bugs." After digging like this for several minutes, she turns her attention to something crawling

in the wood chips and dirt near her. She exclaims: "Teacher, Teacher! I found a crawly thing. I think it is a millipede! Come see!"

Serena's teacher, who has been observing from a close distance, arrives and agrees that it looks like a millipede. He suggests that she find a way to save or keep the insect then use a nonfiction book on bugs to see if she is correct in her identification. Serena puts the millipede in the hole she dug and asks the teacher to watch it while she retrieves the book. She returns quickly with the book in tow. She flips through the pages to find a picture that resembles her discovery. "Yes, it is a millipede," she says with satisfaction. The teacher then offers her paper and a pencil so she can draw the millipede to show her classmates later.

In this vignette, Serena demonstrates several of her developmental skills and capabilities—fine motor skills with her grip on the spade, the disposition of perseverance in her digging efforts, curiosity in searching to see if what she discovered was a millipede, and scientific knowledge and vocabulary development when she identifies and uses the name of the type of insect she found. Serena is encouraged by her teacher to represent her ideas through drawing. It is evident that this play episode is not a science lesson, a vocabulary or writing lesson, or a fine motor skill development activity. However, learning occurs that incorporates all of these domains in an integrated fashion. And this activity is internally motivating for Serena, who displays a deep engagement and a high level of sustained attention as well as enjoyment in the activity.

A play-based curriculum is the ultimate integrated curriculum. However, a play-based curriculum is definitely not an "anything goes" program or a commercial program with a rigid curriculum. Instead, reflective, creative teachers are central to a quality play-based program in which each child is valued and the environment and program schedule are carefully planned to meet the needs of individual children and the group as a whole, while also supporting children in developing an understanding of diverse perspectives and equity in order to be sensitive to the needs of both their classmates and members of their larger community.

The following is an additional example that highlights the integrated learning that takes place through play.

Two-Year-Old Toddlers, Nicole and Malik, Playing with Puzzles

Two-and-a-half-year-old Nicole has joined her new friend Malik at a small table with a rack of five puzzles. She selects the eight-piece puzzle of an elephant. She picks up several pieces and methodically moves them about to see how they fit.

As Mara, the teacher of the children in this vignette, reviews her observation notes from this play interaction in addition to others she has completed over the past few weeks, she makes important discoveries about Nicole's learning, development, and dispositions. She notices that, unless Mara suggests she join a group activity, Nicole prefers to play by herself for extended periods. She also realizes something important about the arrangement of the environment. The small table with two chairs, located in a quiet space, is perfectly arranged to support Nicole and Malik's persistence and problem solving, which are both important for learning. Mara notes that Nicole's social–emotional development was supported in today's play because she is showing a growing ability to socialize with her new classmates. Rather than wait for adult help, Nicole herself initiated playing next to a peer. Though neither interacts with the other, both she and Malik appear relaxed and comfortable with their proximity. Mara has already recorded information about Nicole's fine motor skills. Today, Nicole not only picks up the puzzle pieces easily but also turns them around in a precise grasp in her attempts to fit them into the puzzle form. Mara also records several ways that Nicole's play supports her cognitive development, for example, her sense of spatial relationships, knowledge of irregular shapes, and understanding that parts can be combined to make a whole.

The following previously introduced vignettes are examined here through the lens of the integrated nature of learning.

Three-Year-Old Marco Building a Tower with Plastic Building Blocks

Three-year-old Marco is building a tower out of plastic building blocks, making a pattern as he carefully alternates red and yellow squares. Looking around for another red block, he spots small plastic animal figures nearby. He goes over and picks up a giraffe and a monkey, then places them on top of the tower. "Be still … get ready," he commands loudly. "Blast off in one minute." He rises dramatically and, with a swift jab, crashes the tower down.

What could Marco's teacher learn from observing and documenting his play? She might describe what she sees as evidence of his physical development and the fine motor skills he needs to balance the animals on top of the tower, or evidence of his cognitive development as seen with the mathematical thinking he uses to create the pattern with the red and yellow squares. She could also note the development of symbolic play as Marco uses blocks to construct and symbolize a tower and then creates a narrative for the animals with a beginning, middle, and dramatic end as the tower comes crashing down. This brief moment of play also displays Marco's emotional development and his ability to regulate his emotions. Specifically, she could note that, although Marco gets excited by thinking of "blasting off" and crashes his tower, he playfully crashed something he built but did not interfere with something others built, which some children would have done. Finally, Marco's teacher could find evidence of the development of dispositions such as persistence, creativity, and risk taking.

Four-Year-Old Classmates, Sydney and Ben, Rolling a Ball down a Slope Outside

Sydney and Ben stand on the grassy knoll at the edge of the playground. Sydney rolls a ball down the slope, Ben races down, retrieves it, races back up, and hands it to back to Sydney, who tosses it down again. This time they both race down, run up and down six or seven times, then flop on the ground, out of breath but laughing together.

What can be observed in this brief playful interaction with preschoolers Sydney and Ben? A teacher watching this joyful play could document evidence of their physical development, including coordination of movements together, muscular strength, flexibility, and ability to sustain active play for a period of time, which requires cardiovascular endurance. Evidence of cognitive development is also on display. Sydney and Ben have created a simple game for two players that requires social–emotional skills, including taking turns, adhering to simple roles, and following the implicit rules of their game. Both children display several important dispositions for learning, including persistence, risk-taking, and creativity.

Preschoolers, Teresa and Rafael, Playing Baby in the Dramatic Play Area

Teresa and Rafael are playing in the dramatic play area. Teresa has announced that she is the mom and Rafael will be the baby when Rafael declares that he wants a tamale. Teresa steps out of the play frame for a moment and makes her implicit rules of play explicit, explaining: "Tú eres el bebé y todavía no comes, tú tienes tu lechecita en el biberón." Rafael responds: "Now I'm me. I'll have a bottle when I play baby."

A preschool teacher observing these two children at play could make notes about the children's social–emotional skills, including how both Teresa and Rafael communicated a personal sense of agency. They were each capable of making decisions about what and how they wanted to play, and they displayed self-regulation in their response to each other. Their sociodramatic play required that they negotiate with each other about what they would do and when. Cognitively, there is evidence of their ability to engage in symbolic play with a familiar scene and objects. And notably, they demonstrated in this interaction that they both have the ability to move in and out of the play frame. Both children displayed the disposition of persistence—even when Rafael disagrees with Teresa—and risk-taking is seen with Rafael when he states his position ("now I'm me") but indicates that he will play baby later.

Five-Year-Old Mia, Jorge, Bo, and Tyler, Playing Store

Five-year-old Mia, Jorge, Bo, and Tyler have been playing market, and the store opens this morning. After long negotiations, they agreed that Bo will be the cashier and Mia, Tyler, and Jorge will stock the shelves and help customers. They have a problem—no shoppers arrive. Jorge suggests a sign to tell people they are open. He goes to the art area and finds several long pieces of tag board and markers. Carefully, he writes OPN—ABIRTO, takes it back to the store, and explains what he has done. All four children gather round the sign and yell to their classmates: "Open! Abierto! Come to the store!"

What learning, development, and dispositions are observed in the children's pretend play scenario? Their kindergarten teacher could note social–emotional skills, including the ability to cooperate and coordinate play with others. The teacher could also document other aspects of cognitive development, including bilingual language development and the ability to switch from one language to the other and to translate, understanding that others might not know one of the languages. In addition, the teacher could note literacy skills, knowledge of social studies content (e.g., stores in the community and what they sell), and several important dispositions for learning, including persistence, creativity, problem solving, innovation, sense of self or agency, and the ability to look at things from multiple perspectives (e.g., thinking about the part each will play and how to involve their classmates as customers in their play, then making signs in Spanish and English and yelling out to tell others that their store is open).
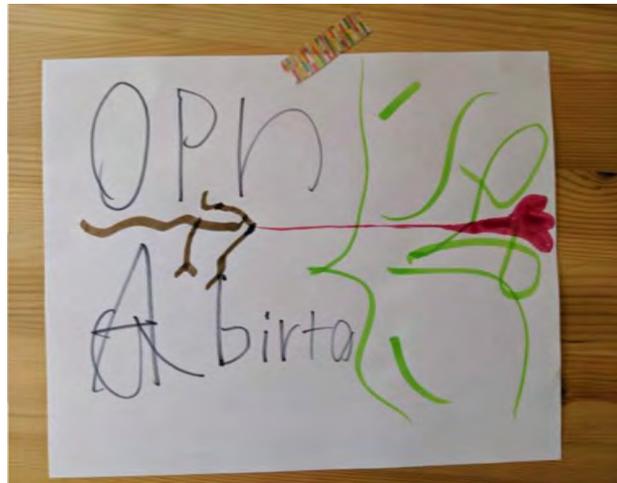
As illustrated throughout these vignettes, play is where integrated learning happens. Through play, infants and young children learn about people, objects, and events. They experience how one person, object, or event relates to another and, as they do so, they build relationships of understanding about the world. Children are not waiting for a lesson plan

to motivate them to play. As Reynolds and Jones point out, "Play is what [children] do at every opportunity, what they do best, and most attentively. Because play gives pleasure, it sustains itself" (1997, 3).

Studies from neuroscience show that infants and young children are biologically prepared to play (Davis and Panksepp 2018). Through play, they stay connected to, learn from, and learn about the people who make up their world. There is an affectionate, joyful companionship in children's play (Trevarthen 2017). Play connects infants and young children to others, ensures a sense of belonging to the community and culture, and builds friendships. Within the context of emotion-rich, interactive play with others, infants and young children thrive—building ideas and inventing, transforming, and embellishing their roles in play and the narratives they create and act out. **Children learn best through play. It is important that early childhood teachers create supportive environments for children that allow them to participate in different types of play to optimally support their development.**

Key Take-Aways for the Early Childhood Classroom

- How teachers view children—their image of the child—affects their interactions with children and their approach to designing educational environments for them.

- Young children think and learn like scientists.

- Frameworks developed by theorists and researchers can be helpful for understanding the complex relationship between play, development, and learning for young children.

- There are many different types of play, and they each provide important benefits for children's learning and development.

- Through play, children can develop an understanding of diverse perspectives and beliefs about justice as they strengthen their ability to be sensitive to the perspectives and needs of individuals who are different from themselves.

- California's foundations and frameworks highlight play as a primary context for learning and where the integrated nature of learning happens (CDE 2010, 2011, 2012, 2013).

PART 3:

The Essential Roles of Teachers and Administrators in Supporting Play-Based Learning

This chapter:

- Discusses the complex and dynamic role of adults in supporting and guiding children's play across different development ages
- Introduces a continuum of strategies for supporting and guiding children's play
- Discusses the use of provocations, natural objects, and loose parts
- Describes the process of observing, documenting, interpreting, and naming the learning in play through assessment
- Explains how to engage families in play-based learning programs
- Highlights the important role for administrators and principals in supporting play-based learning

The role of the adult in children's play transforms across infancy and early childhood. Newborns and young infants call upon adults to engage in person-to-person play, a simple exchange of smiles, gestures, or vocalizations (Trevarthen 2017). By six months of age, person-to-person play transforms into person-person-object play—interactive games that involve both people and objects. Such games are simple and can last just a few seconds, for example, a baby extends their arm with a toy for the other to take, then reaches with an open hand in anticipation of it being returned. Additionally, adults control the environment, positioning, and time spent in playful interactions as well as the materials available. As infants gain the ability to crawl and to walk, their play begins to revolve less around the adults caring for them and to focus more on the objects they encounter in the surrounding play spaces.

Play is a window into learning in the early years. Within everyday experiences in play, children build concepts that are foundational for all

learning that follows. As they play with objects, infants and children build understanding of number, spatial relations, causality, classification, and representation. These concepts prepare them to become mathematicians, engineers, scientists, artists, teachers, and many other types of professionals. Because infants and young children play with that which they encounter, what they are surrounded with and consequently what they experience affects what and how they learn. Children rely on those caring for them to arrange their surroundings, that is, to provide an engaging array of objects to use in building these concepts. This role—setting up the play spaces or arranging the environment to support play-based learning—is key to how adults support children's learning through play, as is careful observation of what children do when they encounter these objects in play.

In addition to planning for and arranging the play spaces, adults support infants' and children's learning through playful sharing of diverse songs, stories, and engaging conversations and interactions. In simple moments of talking together or doing a task together with caregivers, infants and young children experience the stories, traditions, values, and expectations of the surrounding family, culture, or community. These activities help build a sense of belonging to a social group and awareness of people and cultures different from themselves. Depending on the cultural context of the community, these experiences vary. Consequently, what children learn as well as how they learn it within conversations and interactions varies widely.

This chapter describes ways that teachers and those caring for young children can support the inherent power of children's play to build knowledge about the physical world and the social world, including that which is deemed valuable within their own and

other cultures, families, and communities. CDE's *California Infant/Toddler Curriculum Framework* (2012), *California Preschool Curriculum Frameworks* (2010, 2011, 2013), and *The Integrated Nature of Learning* (2016b) describe teaching and learning within three contexts: play spaces, daily routines, and everyday interactions and conversations with children. Each is a context for play-based learning that provides teachers and administrators many opportunities to support children.

Contexts for Learning

As elaborated in *The Integrated Nature of Learning*, each of these three contexts connects with the others to create a comprehensive early childhood curriculum (CDE 2016b). The teacher's role in support of play-based learning within each context can be described as

- designing play spaces that are inclusive of diverse learners and communities as environments for learning;
- designing care routines that invite children's active participation and initiation of play; and
- planning interactions and conversations with children that support learning.

Each context holds possibilities for children to learn, and each requires thoughtful planning. Teachers prepare written plans that describe what materials will be added to the play spaces and what modifications will be made to the daily routines as a means of inviting children to use emerging skills. They also prepare written plans that describe conversations they intend to have with children, whether one-on-one conversations, small- or large-group conversations, or specific interactions with children, which include ways to help children feel safe, express their ideas and feelings, or support their attempts to make and keep friends. Within each of these three contexts, teachers build on young children's biological urge to play with people and objects while participating in events, all of which provide opportunities to construct desired concepts and skills.

Designing Play Spaces as Contexts for Learning

Play spaces hold immense possibility for concept development. Consider the learning that happens in the following moment of a two-year-old's play (Maguire-Fong 2015, 27):

> For several days, Victor has spent considerable time gathering, carrying, and loading into containers a collection of small animals that we make available to the children in the connections and construction play area. Today, he returned to this play, but added to his play a collection of vehicles.
>
> - He selected only the tigers, lions, and blue vehicles.
>
> - He put one cat on top of each vehicle.
>
> - He experimented with several combinations, but in the end he had all three blue cars together, with the one blue truck in the front.
>
> - He placed the two striped tigers in the front and the two other cats in the back.
>
> - The cats and the trucks were lined up in order of size and were all pointed in the same direction.

The following is what Victor's teachers recorded as their interpretation of what they observed (Maguire-Fong 2015, 27):

> Victor initiated this play on his own. He selected only the lions and tigers and only the blue vehicles from the collection of items on the shelf. He matched the smaller animals to the smaller vehicles, building categories of size, color, and shape. He experimented with placement of the objects before lining the cars to make a straight line, each pointing in the same direction, with two distinct types of cats on two distinct types of vehicles. He appeared to build a particular order and pattern in how he laid out the toys.

In his play, Victor reveals clues as to what he might be thinking. What he selects from the assortment of toys available and how he places them together show his ability to relate objects by size and similarity of distinguishing features, color, shape, or design. His actions demonstrate that

he is aware of the distinct physical properties of the various vehicles and creatures he has selected for his play. As he relates one object to another, in a distinct order of color, size, and shape, he uses the concept of classification to create two sets of objects—a set of vehicles and a set of cats.

This learning experience was made possible because a teacher thought to put this selection of objects in the play space, objects that vary in size, color, and distinguishing physical features. In so doing, the teacher arranged the play space with materials that support children in building relationships of size, number, and order. Just as a scientist works in a well-stocked laboratory, children thrive when they can play in well-stocked play spaces, which essentially are their laboratories for learning.

Children scan materials to distinguish differences and similarities as they play. This approach is key to developing a scientific mind. When teachers arrange the play space with objects that are identical as well as objects that are similar yet distinct in a particular feature, they challenge children to classify objects as being the same or different, or as being the same yet varying by one feature, be it size, shape, texture, or color. The toys Victor encounters provoke him to arrange the materials as pairs, as sequences, as sets, as identical, and as similar yet distinct, which supports development of the concepts of number and classification. With younger infants, access to large collections of identical or similar objects provides opportunities to make "many" rather than "few," which supports the development of the emerging concept of quantity.

When teachers assemble an array of toys and materials that invite comparison, classification, and quantification and place these items in the play space for children to discover, they assume an important teaching role by paying careful attention to the amount of play materials offered, where they are offered, how children access them, and for what period of time.

The type of container used to hold and make available the play materials in the play space matters because it can either render the materials visible and accessible or render them hard to find or out of reach. Similarly, the time available for exploration of objects can either restrict and limit the play or, conversely, when ample and uninterrupted, deepen the play and enhance learning. How teachers manage time and space, therefore, is important with respect to carrying out the role of teacher as stage manager (see table 3 for a description of additional roles teachers can take to support children's play).

Table 3. A Continuum of Strategies to Support and Guide Children's Play

Source: Van Hoorn et al. 2015, 110–121

Teachers have many options for supporting young children's play that range from indirect to very direct roles. Effective early childhood teachers are flexible and responsive to the changing developmental needs and interests of individual children and rely on using a wide range of strategies in dynamic and flexible ways.

Indirect Strategies | Setting the stage | Artist apprentice | Peacemaker | Guardian of the gate | Parallel player | Spectator | Participant | Matchmaker | Story player | Play tutor | Direct Strategies
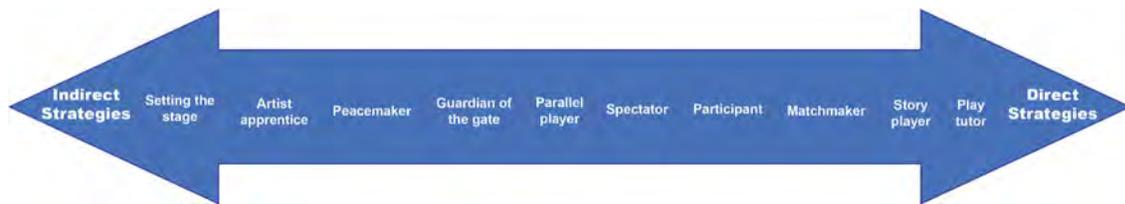
- **Setting the stage:** Teachers arrange the physical space, select play accessories that represent the diversity of the community, construct the daily schedule to include time for different types of play, and extend the curriculum based on children's interests and developmental needs.

- **Artist apprentice:** Teachers help remove clutter in the physical space around an ongoing play episode or offer accessories for play, much like a set assistant in a theater. Teachers in this role also physically protect an ongoing project and help others set up their projects in adjacent areas (e.g., post "In progress" signs on block constructions).

- **Peacemaker:** Teachers help children resolve conflicts that appear in their play. They may model scripts to support children in negotiation, offer accessories to help solve disputes, suggest related alternatives for disputed roles (e.g., "does the princess have a sister or cousins…?") to model flexible thinking and problem solving for resolving conflicts, or help children to invent roles that stretch their thinking beyond the need to possess disputed roles or materials.

Table 3. *(continued)*

- **Guardian of the gate:** In this role, teachers support children in entering play with their peers without violating the rights of the players in an already-established episode, and, at times, they make a judgment that it is not appropriate to interrupt. When teachers do help children to enter peers' play, they draw on a range of strategies. One example of a strategy is to encourage children to introduce an accessory or take on a new role that aligns with the ongoing play. For instance, on observing an onlooker who wants to join her peers playing houseboat, a teacher suggests that she deliver them a large package, providing her with a way to interact within the play frame. Teachers in this role can also narrate for children what the intentions of an onlooker are: "I see Sandy really wants to join your group. She is looking for a friend to play with. Would you like to be her friend?"

- **Parallel player:** Teachers play next to but not with the child, using similar materials but not interacting. The teacher might first imitate the child's behavior (pouring sand into a container). Next, the teacher might introduce a variation into the play (using a funnel and watching to see if the child imitates this). In pretend play, a teacher might use a prop in a new way, subtly extending the child's play.

- **Spectator:** In this role, teachers provide comments from outside the children's play about the themes and content of their play. In essence, they are acting like a coach or interested spectator on the sidelines. For example, when two children carrying suitcases approach their teacher, the teacher asks about their travel plans: "Have you bought your tickets yet?" Another example of the observer role, from a vignette in the previous chapter, is when a teacher, responding to a child's discovery of a millipede while digging, comments and offers her paper and a pencil so she can draw a picture of it. Teachers assess when to comment, and are careful not to disrupt the flow of the children's play or introduce new themes or ideas that are not congruent with the children's intentions. A teacher may briefly comment to encourage social behavior, such as: "Micah, you are being so careful building your farm near Adam's creation." Micah may smile and continue building.

Table 3. *(continued)*

- **Participant:** In this role, the teacher engages more actively in the children's play (e.g., a neighbor knocking on the door to borrow eggs, an ambulance driver bringing an injured person to the hospital). When teachers participate in playing out a shared play script, they can use direct or indirect comments to shift or extend the play in a particular way. For example, Matt, a kindergarten teacher, observing that his students' superhero play has been stuck all week in a fight-die-resurrect sequence, encourages them to extend their play by saying, "Quick, we need a nurse! Call 911!" The challenge for teachers entering children's play is to ensure they do not take away the power from the children and find themselves controlling the play. Teachers' comments should never disturb or interrupt the main focus of the play, and they should most frequently play supporting and not starring roles. Often adults end up positioning children in traditional roles that promote stereotypes. However, as coparticipants, teachers have the opportunity to shift children's narratives into stories that promote fairness and are inclusive of all children. For example, teachers can serve as translators or they can create a language bridge when children who are dual language learners try to enter peers' play.

- **Matchmaker:** In this role, teachers deliberately set up pairs or groups of children to play with one another in order to create opportunities for children to teach and learn from one another. Examples include pairing a more sophisticated player with a novice player, a child who is an English language learner with children who are more proficient in English, and children with disabilities with peers who are typically developing.

- **Story player:** Inspired by Vivian Paley's technique of story play, this approach begins with a child dictating a story to a teacher who writes out the words exactly as they are shared by the child (1981, 1986, 1990, 1999). Later, the story is acted out with the whole class. The author takes on the role of director, and the teacher reads the story out loud. The author chooses the part they want to play and selects peers to take the other roles in the story. Props are not typically used, because the emphasis is on imagination.

Table 3. *(continued)*

- Play tutor: When teachers act as play tutors, they assume a very directive role in relation to children's play. Teachers model and direct children's play in this role, providing reinforcement for children's ideas and efforts to interact with others. Direct play tutoring is useful when teachers observe that children's play lacks complexity (e.g., children repeat one-liners they observed on television or in movies without fully participating in the conversation) or when children's attempts to enter peers' play are repeatedly unsuccessful. Other forms of tutoring teachers can use include asking children to serve as "play coaches" for other children or assigning roles and directing children to act out stories read by the teacher. Given the very directive nature of play tutoring, this role should be used carefully.

Choosing a Strategy

- Teachers need to employ significant skill and thought to determine which context, in combination with which child and specific goal, calls for a given strategy.

- Teachers should observe play before they decide which strategy to use to support or guide children's play.

- At all times, respect children's shared meaning making. When teachers do join play, timing is crucial because they should enter without disrupting the progress or integrity of the play. When they exit children's play, they should ensure that control is returned to the child players.

What children tend to focus on in a play space is largely a function of how the materials are arranged. When a teacher places a plastic giraffe figure alongside a book with a photo of a giraffe on the cover, this is done with the intention of communicating possibilities to the children. This simple detail in arrangement will possibly attract children's attention to using the giraffe simultaneously with the book, building a relationship of representation between the two.

In a block area, it is not uncommon for small blocks and small objects of adornment, such as metal lids, to get lost in the bottom of a bin designed to hold a wide assortment of blocks of varying sizes and shapes. Teachers can consider how to draw children's attention to those small blocks and small metal lids by using a strategy called **figure-ground relationships**—arranging materials in space so that certain objects stand out visually and others are in the background. The question in the minds of the teachers becomes, **"How might we arrange materials so that these smaller objects stand out visually from the others, prompting children to incorporate them into their play?"** Teachers recognize that smaller blocks and small metal lids hold potential to add complexity and pattern to children's block structures, so they look for ways to draw attention to them. For example, they may decide to put all the smaller blocks in a low, wide basket on one of the shelves in the block area and, alongside it, place another basket that holds the collection of

shiny metal lids. This makes use of a figure-ground relationship, placing the previously hidden materials in containers and locations in such a way that they emerge visually to the foreground when children enter the play space. As a consequence, the larger, more commonly used blocks retreat visually to the background. To assess the impact of this change, teachers observe the play that ensues. This observation alerts them to anything that happens in response to this planned modification to the play space.

Creating play spaces with distinct identities. In preparing the play spaces for infants and young children, teachers check to make sure that the children involved can easily access all the materials from either low shelves or wide, shallow baskets or bins. When each container holds a distinct type of object—toy vehicles in one, a collection of small animals in another, and a collection of small figures of people in another—children can easily find the objects they seek and return them when they are finished playing with them. In a previous example, Victor's play with the vehicles and toy cats occurred in what traditionally might be called the block area. Because it was a toddler classroom, teachers described this area as the connections and construction

area in an attempt to value how toddlers simply place one object adjacent to another as they notice how one might connect to the other. In time, these connections transform into constructions that become more elaborate with practice throughout the preschool years.

Teachers can arrange this space with other stacking objects, for example, sets of cardboard, metal, or plastic boxes, some identical in size and some varied in size, but all having two flat, parallel sides. Such objects balance, stack, and serve as building materials just like traditional blocks do. A large open floor space and a low, raised surface provide ample space for children to line up objects, stack them, or build more elaborate constructions.

In a connections and construction area, toddlers might find objects that stack, but they might also find conical objects—simple plastic cups or cardboard cones—that stack one into the other, getting higher or longer with the placement of each cup or cone. They might also find large plastic building blocks with connections that secure one block to another. These objects that readily connect may be found alongside sets of wooden or plastic blocks that stack one on top of another.

Placement of pathways leading to or by play spaces is important for safeguarding spaces for play. In group care, people move in, around, and through the room throughout the day, which can distract children from their play. Traffic patterns that lead to and lead around play spaces help minimize disruption of children's play. **A good rule of thumb is to create pathways that lead to, rather than through, children's defined spaces for play.** Assuring that pathways and play spaces are sufficiently wide and that play surfaces are sufficiently accessible to all children is important in planning play spaces that work for children who may vary in patterns of mobility. At the same time, it is important to avoid creating pathways that are wide and straight with younger children as that suggests to them that the pathway is a runway and they are quite likely to use the space for running or other physical movement.

Designing play spaces that are inclusive of diverse learners and communities. A critical responsibility of teachers is to plan for and create environments that are inclusive of diverse learners and diverse communities. Teachers can begin this process by thinking about the children in their classroom—their unique strengths, needs, and abilities as well as the specific materials and forms of adult guidance and support that allow

them to participate fully in the life of the classroom. All children should see themselves acknowledged and included in the classroom community, (e.g., the images, books, toys, and dress up clothes should reflect the children's diverse experiences, cultural backgrounds, and families). Additionally, teachers must go beyond the experiences of children in their immediate classroom in order to **promote equity** and increase children's understanding of the diversity represented in the larger community.

This requires teachers to plan for play spaces that introduce children to diverse people, stories, and cultural practices that are essential and equally valid but not as well-known because of bias and inequitable power structures in society. Designing play spaces that support children in expanding their awareness of diversity and disrupt deficit-based stereotypes is an important part of planning for and arranging play-based learning environments. This involves selecting materials, arranging provocations, or offering suggestions that help children to expand beyond their own experiences and to build understanding and empathy for diverse

individuals in the larger community (e.g., neurodiverse and physically diverse community members, gender-expansive children and adults, people of color in positions of power, and more). **Anti-bias education** (ABE) is an excellent resource for teachers (Derman-Sparks and Edwards 2010). ABE is research informed and provides teachers with many practical ideas they can use to design play spaces that are inclusive of diverse learners and communities. For example, the authors explain how teachers can use persona dolls (dolls introduced to the class with unique personalities, identities, and backgrounds that are treated as members of the class or important visitors) to help young children learn how to cope with complex feelings and life experiences related to identity, diversity, discrimination (e.g., teasing and exclusion), and resilience. By interacting with the dolls, children can be introduced to new vocabulary and perspectives beyond their own as well as strategies for managing challenging situations including trauma and injustice.

Adding surprise and complexity to the play spaces. In the course of spontaneous play, children encounter materials and build relationships of identity, order, size, shape, number, and space. Many materials, such as collections of small wooden or plastic animals and vehicles, are familiar to the children and available all the time in bins in the play space. Other materials, such as a basket of bark or fresh leaves, can be added as a special **provocation** to see if children will use them to extend their play or to add complexity to their play.

What Is a Provocation?

The concept of provocations was inspired by the Reggio Emilia philosophy of early childhood (Edwards, Gandini, and Forman 2011). The goal of provocations is to provide an invitation for children to express themselves and explore and discover new ideas, relationships, and experiences. Provocations are intended to inspire children's thinking, conversations, questions, interests, creativity, and ideas. Provocations can also expand on children's prior thinking, learning, and projects.

Teachers introduce provocations in many ways. Whatever form they take, provocations should be simple and open ended and invite children's diverse expressions. They should also be intentionally

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connected to the children's interests and relevant topics of conversation and study in the classroom. Examples include:

- Nature (found materials)
- A novel or unusual photo, picture, or book
- A culturally specific item from the children's families or local community (e.g., a piece of traditional fabric from the local Native American community or a traditional South American tapestry that inspires children to explore other tapestries, to create a tapestry, to understand textile as a medium for storytelling)
- An interest that a child or group of children has
- An event (guest speaker, presentation, celebration)
- Art materials (new creative materials to explore)
- Questions (from any source)
- Objects and artifacts

Provocation: What will the toddlers do when they find a book about trains near the wooden train set?

Provocation: What will the toddlers do when they are given a chance to explore vegetables from the garden or vegetables used in the soup in a favorite book?
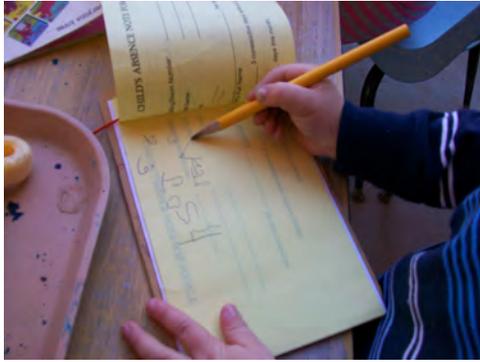
Provocation: What will the children do when they find a favorite doll, name cards with children's photos, a children's sign-in sheet, and books near the classroom entry?

Provocation: What will the infants do when they encounter round metal bowls and lids?

Provocation: What will the children do when they discover mirrors on the floor in the building and blocks area?

Provocation: What will the children do when they find dinosaurs and dinosaur books in the sand table?
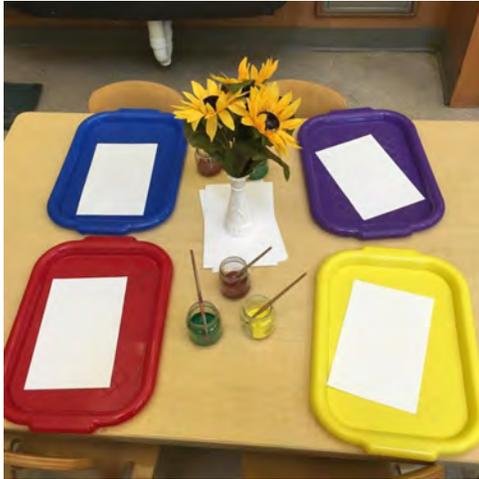
Provocation: How will the children respond when theysee fresh flowers and painting supplies?

Ordinary objects in the play spaces. In recent years, teachers preparing early childhood classrooms have begun to move beyond commercial and educational toys and have sought ways to arrange the play spaces with a wide array of engaging, **ordinary objects** with features that propose many possibilities for their use. Rather than relying solely on commercial toys when setting up spaces for play, teachers add to the play spaces a wide array of ordinary, everyday objects that are safe and nontoxic. These objects might include a range of kitchen implements and cooking pots, made from plastic, metal, or wood; bags, baskets, and boxes; or brooms and dustpans.

Drawing on the term coined by architect Simon Nicholson (1971), Jones and Prescott (1984) suggest that **loose parts** contribute greatly to the potential richness and complexity of any learning environment. Loose parts might include collections of colorful jar lids, a collection of stackable, recycled yogurt cups, or an assortment of flexible, gauze bandages, all of which children might use in an endless number of ways. Children use loose parts just like designers and builders use them, and their engagement in construction and in connecting one thing to another sustains and adds complexity to the play (Daly and Beloglovsky 2014; Jones 1989).

Loose Parts and Play

In early childhood education settings, loose parts mean alluring … found objects and materials that children can move, manipulate, control, and change while they play. … Children can carry, combine, redesign, line up, take apart, and put loose parts back together in almost endless ways. The materials come with no specific set of directions, and they can be used alone or combined with other materials. … Children can turn them into whatever they desire: a stone can become a character in a story; an acorn can become an ingredient in an imaginary soup. These objects invite conversations and interactions, and they encourage collaboration and cooperation. Put another way, loose parts promote social competence because they support creativity and innovation. All of these are highly valued skills in adult life today. (Daly and Beloglovsky 2014, 3)

Interacting with loose parts supports children in engaging in "what if" thinking which strengthens their skill at risk-taking, problem solving, thinking imaginatively, and generating solutions.

Example Loose Parts

- Rope, wool, ribbon
- Funnels, water, buckets
- Wood (sticks, stumps, boards, coins, branches, wood chips, cinnamon sticks, pegs, beads)
- Shells, leaves, pine cones
- Plastic bottles and tops
- Seeds (acorns, nuts, dried beans, seed pods)
- Flowers, petals, corks
- Sand, stone
- Dirt (mud, sand, clay)
- Grasses (hay, straw)
- Textiles (hemp, cotton, wool, felt, silk)
- Newspaper, cardboard, paper tubes

Source: Daly and Beloglovsky 2014

Open-ended materials support children's development of agency and self-expression because they are able to use the materials to create their own constructions and to tell their own stories. When children use loose parts in many different ways on a daily basis, they have opportunities to reflect their daily experiences, both by themselves and with their families and communities, as well as to imagine and explore new possibilities for themselves and their lives. Loose parts are dynamic, just like identity and culture, and children can continually return to the same materials to explore and create in new ways including experimenting with new understandings of the world (e.g., aspects of their identity, their own power and agency, and making sense of power relationships they observe all around them) that are difficult to explore outside of the context of play. Children can use loose parts and open-ended materials to play out narratives where they imagine what it would be like to have power and agency, inverting the reality of their daily experiences.

With the advent of recycle and reuse centers designed to serve early childhood educators, teachers have extensive resources to draw from in arranging children's play spaces both indoors and outdoors (Ferrari and Giacopini 2005; Topal and Gandini 1999; see Reusable Resources Association in the resources section for a list of recycle and reuse center locations). Figure 3 illustrates a collection of ordinary objects selected for use with toddlers. Safety becomes an issue when planning and setting up play spaces for children under two years of age, when it is not uncommon for infants to explore objects by putting them in the mouth. To avoid the risk of choking, it is important to consider object size and avoid placing objects in the play space that fit into a paper towel roll along any one dimension.

Children's Pretend Play and Divergent Thinking and Creativity

A rich body of research links pretend play in early childhood to the development of imagination and later creativity (Russ 1993; Russ and Fiorelli 2010; Russ, Robins, and Christiano 1999). Several longitudinal studies provide evidence that pretend play is predictive of divergent (i.e., generating creative ideas by exploring many possible solutions) and original thinking over time. The quality of imagination and fantasy in early pretend play predicts divergent thinking, a relationship that is independent of IQ. One study followed children into high school and showed that the quality of fantasy and imagination in early childhood was positively related to divergent thinking ability in high school—an effect that spanned over 10 years (Hadani 2015, 11).

Figure 3. Ordinary Objects in the Play Space

Natural materials in the play spaces. To preserve children's right to know and to experience the world of nature, early childhood teachers can add provocations to the play space that come from nature, such as sections of tree rounds added to a sandbox or playhouse (Louv 2008). Or they might offer children

experiences with the power of sunlight to create shadows or reflections. The opportunity to explore the power of the wind or the range of sounds that come from different kinds of metal can be added to outdoor play spaces.

By placing flower pots in a moist area of soil, teachers can create habitats for small creatures such as pill bugs, worms, or snails. These habitats become places for children to study living creatures—how they move and what they appear to need to survive. Teachers can also create spaces where children can explore the properties

of water as it flows freely and as it mixes with soil, water, rocks, or sand, opening the world of geology to young children. The world of botany becomes part of their lives as they experience seedpods, flowers, grasses, and leaves. In small gardens, children can experience the life cycle of hardy vegetables as well as nontoxic flowering plants, all of which bring new sensory experiences.
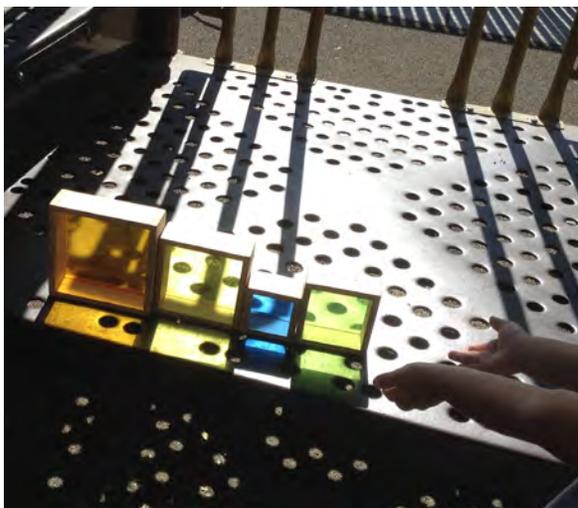
Experiencing Color and Light. When offered objects of transparent or translucent colored plastic alongside shiny metal bowls or trays, infants can play with making color with reflected light, using safe, nonmessy materials. Such play is a fun and easy way to introduce infants and young children to the world of color and patterns of light, which are foundational concepts in art.

Arranging a play space to support fantasy play. Whether using ordinary, commonly seen objects, loose parts with potential for building

and representing, or natural materials found in the play space, children spontaneously create fantasy play scripts. These stories represent children's ideas, feelings, and experiences and create narratives that draw from life (Paley 2004). Children organize and connect ideas in story form, invent problems and solutions, and create scripts that give them power and control or help them cope with their feelings of worry and vulnerability (Paley 1990, 1997). It is important for teachers to observe the themes or scripts children in their care are representing in their play and to notice and intervene if children's play scripts are reinforcing stereotypes, bias, or exclusion. (Strategies for addressing difficult topics or play that reinforces societal inequities are discussed in chapter 6.)

A good source for ideas on what to put in the play space to encourage fantasy play is to consider clothing, accessories, tools, or facsimiles of equipment that children might regularly see or experience in the home or in their surrounding community. For example, children enrolled in a child care program serving students on a college campus might incorporate backpacks and books into their fantasy play; children whose parents work in agriculture might enjoy having toy tractors and trucks to incorporate in their play; and children who regularly see spice grinders or woks used in the kitchen might enjoy finding these in a pretend play kitchen. It is important that the accessories provided do not reinforce cultural stereotypes. Learning about the authentic artifacts found in the children's own homes as well as objects that are found within the larger communities where families live (food, textiles, signs and other decor) is a good place to start to identify meaningful and appropriate objects to support fantasy play. Food and textiles are the most common ways to include artifacts that promote diversity.

Teachers should provide more realistic props for younger children whose symbolic development is less sophisticated. Additionally, very young children (two to three years of age) appreciate having multiple sets of realistic props to use in their fantasy play. Having multiple sets will reduce the need for conflicts over objects which prevent children from engaging in imaginary play. Older children prefer more open-ended materials that allow them to create multiple and dynamic meanings to influence their use (e.g., scarves, blocks, pebbles, paper, hats).

Designing Daily Routines as Playful Contexts for Learning

Many care routines punctuate children's waking life—eating, toileting, napping, hand washing, and transitioning from one experience to another. Each holds possibilities for infants and young children to use emerging skills and concepts. To tap the inherent play-based learning potential of daily routines, teachers can organize tasks and routines as invitations to infants and young children to participate playfully and actively. To effectively plan for such participation, teachers must recognize the value of slowing down and segmenting the task to make it easy for children to participate in their own way. An example of how teachers do this can be found in the following excerpt from CDE's *California Infant/Toddler Curriculum Framework* (2012, 26):

> Four toddlers are seated at a low table for lunch. Their primary care teacher sits with them at the table. To his right, on a low bench, the teacher has a bin that holds everything he needs for the meal. He pulls out bibs for the toddlers and helps each toddler put one on. Each toddler finds a cube chair to sit in. The teacher puts an empty bowl in front of the toddler on his left. He offers this toddler a pair of small plastic tongs, holds a plate of small sandwiches, and asks, "Would you like to take a sandwich?" The toddler grabs the tongs and, after a few trials, manages to pick up one of the sandwiches and drop it onto his plate. Later, after each toddler has taken a sandwich, the teacher pulls from the bin a clear plastic measuring cup, on which a red line is drawn at the one-cup mark. He fills the measuring cup to the red line. He places an empty glass in front of a toddler and, offering the toddler the measuring cup, says "Would you like to pour?" The toddler wraps his hand around the handle and tips the cup over his glass. He spills a bit at first, but adjusts his hand and manages to empty the measuring cup. He looks up at the teacher and smiles. The teacher smiles in response, saying, "You poured your milk, Stephan! You know how to do it!" The toddler seated next to Stephan reaches for the empty measuring cup. The teacher says, "And now you can pour milk into your glass, Alexi. I'll put the milk in the measuring cup first."

Creating ways for children to pitch in. In this example, the teacher gave careful thought to the type of eating utensils used. The pitchers are made from a transparent material, which is a feature that helps children see

the line of milk being poured into the cup, and have handles that are easily grasped. The teacher has selected the serving tongs, spoons, and forks that make it easiest for the toddlers to serve themselves. Just as play spaces serve as young children's laboratory for learning, the daily routines do this as well. Planning for the daily routines so that infants and young children can participate actively and successfully is a key aspect of curriculum planning.

Developmental psychologist and researcher Barbara Rogoff describes children's eagerness to help out with daily tasks as "pitching in" (2011). Her research shows that children do this across cultures to learn the ways of the family and community. Children learn how to pitch in through careful observation, which also builds their repertoire of practices that promote learning. In group care settings, the rituals that surround arrivals and departures, meals, naps, diapering, toileting, and dressing provide excellent opportunities for children to pitch in and, in so doing, use and challenge their emerging skills and concepts.

Playfully organizing tasks. Planning ways to invite children's active participation in everyday routines requires that teachers be inventive and resourceful. A simple way to organize the many ways children might pitch in with a variety of daily tasks is to use a helper chart made with cards showing children's photos or printed names alongside an image that represents a specific task to be assumed by a child helper or pairs of children who have to work together to complete a task.

This photo illustrates how a helper chart can be customized to fit the various projects underway in a classroom. In this example, taken from a classroom of three-year-olds, two to three children help set the meal tables at lunch, one feeds the goldfish,

one feeds the bird, one waters the plants, and two children work together to set up a special water bottle to place in a snail habitat in the science area. The latter role emerged as part of the children's long-term investigation of snails. In this project, the children transformed a terrarium into a snail habitat and placed it in the science area for all to experience for several weeks. Maintaining this habitat became one of the daily tasks. To keep the snail habitat sufficiently moist and cool, a helper was assigned to put a recyclable plastic bottle filled with frozen water into the terrarium daily. The frozen water bottle, when placed on the soil in the terrarium, would provide the snails with a welcome source of moisture as the ice melted and water condensed on the outside surface of the bottle.

With infants and toddlers, dressing and diapering are frequent routines that punctuate the day. When tapped as opportunities to invite children's emerging ideas and skills, they become a rich context for play-based learning, as illustrated in the following conversation between Thomas and his primary care teacher. Notice how the teacher slows his pace and uses clearly ordered words and gestures to invite this infant to become an active partner in the routine.

Thomas' primary care teacher squats in front of Thomas and catches his gaze, saying, "Thomas, I'm ready to change your diaper now. I hope you're ready. What do you think?" Reaching toward Thomas, with palms turned up and pausing as he speaks, the teacher invites Thomas to notice that he is preparing to pick him up. Thomas smiles at his teacher, drops the toy he is holding, and reaches toward him. The teacher picks him up, saying, "I like that, Thomas. You told me you were ready," and as he carries Thomas to the diapering counter, says, "I'm going to put you down now," before gently lowering him onto the counter. Catching Thomas' gaze, he points to the baby's shorts and says, "First, we'll take your shorts off so we can change your wet diaper." Thomas lifts his hips slightly. "Thank you, Thomas. You're helping me! That's great. Next comes the wet diaper." Thomas shifts his weight slightly, and his teacher removes the wet diaper. Thomas hears, "There it goes, into the diaper bin." Thomas watches as the diaper drops into the bin. "And now I'm going to clean your skin. Are you ready? This is a wet cloth. I'll let you feel it." Thomas touches the cloth held close to his hand. (Maguire-Fong 2015, 28)

Many rituals and routines occur regularly within the course of each day, providing a rich array of opportunities for teachers to plan ways to include children as they use and challenge their emerging skills and concepts. As preschool-age children transition from a large group gathering to self-selected play, teachers can invent engaging rituals to facilitate how children transition from being seated together as a group to playing freely in the play space (CDE 2016b). For example, a teacher might create a game in which children watch to see which card the teacher selects from a pile of cards, each printed with a child's name on one side and a photo of the child on the other. As children consider what is printed on the card, the teacher might say, "If your name starts with a /k/, this might be you. Anyone want to guess?" Such transition routines invite young children to play with the sounds of language and the use of print—emerging concepts that are important in building a foundation for literacy.

Planning Conversations and Interactions That Occur During Play

The conversations and interactions that occur during moments of play provide a third context for teaching and learning, rich in opportunities to build language and to learn the expectations, beliefs, values, and traditions of the surrounding community. Infants and young children rely on those who care for them to talk with them and engage them in meaningful, interactive conversation. Learning language and the give-and-take of social conversation requires language-rich environments where caring adults invite infants and young children to hear and eventually use language as a means of communication. Conversations and interactions are a primary context for acquiring what child development theorist Piaget describes as **social knowledge**—the language, customs, beliefs, and expected behavior of the community in which the child is raised (Singer and Revenson 1978).

Teachers need to observe the natural occurrence of conversations and storytelling in children's play and actively encourage all children to have these experiences. Some

children may need teachers to actively scaffold their use of language and storytelling (e.g., children who are dual language learners, children with disabilities, and others) throughout their daily interactions including play.

Informal, small-group conversations. Early childhood educator and author Vivian Paley champions the importance of engaging in informal conversations with small groups of three-to-five-year-olds about their play (1986). She uses simple questions with children to deepen her understanding of what they are thinking, and she never presumes that she knows what their answers might be. In her many books detailing these conversations, she captures children's thinking and demonstrates for teachers the value of engaging children in informal conversations about their play (Paley 1988, 1997, 2004). In reflecting on what children say during these conversations, teachers gain insight into children's ideas and intentions. These ideas and intentions often open up new avenues for exploration, that is, new directions for curriculum that have the potential to help children deepen exploration of their ideas.

Informal conversations, to be truly informative and helpful with respect to guiding the curriculum, are not led by questions to which the teacher already knows the answer or by questions that simply elicit mundane facts, for example, "Where did we go on our walk this morning?" Instead, they are led by questions that genuinely seek a child's opinion or thought, like "Remember how yesterday as we returned from our walk, we saw people sawing big limbs from a tree? Some of you wanted to climb on the big branches. Perhaps there is a way we could bring some back to our yard. Any ideas?"

Teachers must be aware of which children they tend to have information conversations with and make a point to connect with every child in their class for an extended conversation with consistency. Teachers must avoid a pattern where only a small group of children (e.g., those who are more outgoing or confident) receive their sustained attention in these informal conversations.

Storytelling. Through storytelling about children's play, teachers and other adults can expand on children's play experiences to relate what happened in the past to what is happening in the present (Jones and Reynolds 2011). Teachers can draw easily from their observations of children's play through storytelling, capturing the spoken script while

observing the play and retelling it—a simple form of storytelling that gives narrative to children's play. This approach stands in stark contrast to a teacher simply asking the children to recall their play, which is more like show-and-tell. When teachers use storytelling to capture children's play, they narrate what they see and welcome children's corrections or additions, drawing children in as active participants in telling their story. A story might begin as follows, "Tasi and Adam are selling gas to the drivers of all the cars coming down the road. Tasi takes the money, and Adam pumps the gas. Now there's a whole line of cars waiting."

Interactive book reading. As with storytelling, reading books to children holds the potential to become a participatory, playful activity. Children enjoy listening and being read to, but they also enjoy helping with the narration. As they listen, they absorb the lyrical rhythms and rhymes and the distinct sounds and patterns of language. Children respond with their own attempts to participate in telling the story, building language skills and concepts. These actions can be seen even in young infants, who participate with a brightening of the eyes, a lifting of the eyebrows, open mouth, arm motions, leg kicks, and imitative sounds and gestures.

Young infants delight in turning and flipping through the pages and pointing to pictures, with little concern for a specific order. Older infants chime in with a familiar word as it comes up in a predictable phrase repeated throughout a story. Reading books with young children means entering into an interactive dialogue, naming things of interest, paying attention to children's contributions to the story, and describing what appears to catch children's interest, even as it veers from the words on the printed page.

Sharing songs, fingerplays, and chants. Fingerplays, songs, poetry, rhymes, and chants capture another form of storytelling within interactive conversations. Infants and young children delight in the rhyme and repetition of traditional chants, songs, poems, and fingerplays, many of which involve gestures easily imitated and led by the children themselves. Many fingerplays

take the form of ritualized, pleasurable games, with the child and teacher interacting in an exchange of a repeated sequence of actions accompanied by specific words and phrases. These games often involve predictable switching of roles, providing playful opportunities to engage in turn taking with another. Songs and chants that are rich in repetition and rhyme enhance oral language development and deepen children's awareness of and familiarity with the distinct sounds of language. An example can be seen in the traditional chants "Hickory Dickory Dock" or "Los Pollitos Dicen," which play with the repetition of sounds. When children play with the distinct sounds of language, they build phonological awareness, a skill that facilitates becoming a successful reader.

Conflicts during play. Young children are intent on making friends, but in doing so they face the challenge of keeping friends when disputes arise in play. They often turn to nearby adults for support in dealing with the conflict. What the adult says in response or how the adult interacts with the child in that moment is a key aspect of teaching and learning and a critical component of curriculum and play-based learning.

Many disputes that arise among young children relate to possession of desired objects. Although it is common knowledge that infants and young children are acutely aware of their own intentions, desires, and feelings, it may come as a surprise to many to learn that researchers have discovered that infants and young children are also very aware of what others intend, desire, or feel. As they approach their first birthday, they show evidence of being aware of others having plans, goals, and intentions (Agnetta and Rochat 2004; Tomasello 2009). This other-awareness prepares them to experience the joy of playing with others and to take on the challenge of negotiating with others when disputes arise. However, they often seek the help of teachers or other nearby adults for support in resolving disputes with peers.

A conflict over possession of toys among very young children is best viewed as simply a momentary breakdown in children's ability to coordinate their attention, intention, or desire with others' attention, intention, or desire. Through their impassioned cries or sad demeanor, children ask teachers to guide them through the complexity of social conflict in play with others. The goal, on the child's part as well as the teacher's, is to get the play back on track and preserve the friendship. Most conflicts between very young

children do not involve the use of physical force or hostile aggression, although there may be impassioned exchange of feelings. Often, a dispute involves a back-and-forth relay of signals showing that each child wants control of a toy that the other possesses (Ross, Vickar, and Perlman 2010). Children are reading and responding to each other's behavioral cues, relaying intention or feeling through words or gestures.

When teachers invite children to listen to what the other is feeling or wanting and to express in words their own desire or intention, they support children's attempts at communication that are already underway. For example, a teacher might respond to a conflict by saying: "It looks like you both want that truck. Josey has a tight hold on it, and she is shaking her head, 'no,' and Leo is pulling on it and trying to get it from Josey." The teacher reads what each child is doing and puts the conflict into words. By watching carefully, teachers sometimes know who grabbed the toy from whom, and they can follow with a suggestion like "Leo, ask Josey, 'May I have the truck?' She might give it to you." Such a simple intervention— **offering a useful phrase to imitate**—is often just enough to get the play back on track.

At other times, teachers offer **a clear, genuine question** to get the play back on track. A teacher might say: "Kylie, this is Jarrett's red bucket. He really wants to finish filling it. There are some other buckets on the shelf available for you to use. Will one of those buckets work for you? If not, you can ask Jarrett if you can use this red bucket when he is done using it. You could ask, 'May I use the bucket, please?'" Jones and Reynolds point out that **giving children clearly ordered words is just as important as providing them with clearly arranged materials in the play space** (2011). Both strategies take full advantage of figure-ground relationships and help children distinguish the materials or the words that might work to sustain the play.

As they attempt to engage all children in helping clean up after a bout of messy play, teachers may find themselves scolding or reprimanding those who do not cooperate, but there is risk that such intervention has the

effect of shaming children who are simply intent on completing their play. **Observant teachers can recognize the script being played out by children and use questions that fit within it.** For example, faced with a squad of "invaders" reluctant to respond to the signal to clean up and prepare for lunch, a teacher might ask: "Are any of these invaders strong enough to pick up blocks? One block? Two blocks?" In describing the power of listening to and entering children's play scripts respectfully, Paley explains, "[They] love it when I behave sensibly," that is, within the narrative of the children's play script (1988, 102).

Teachers of young children are often called upon to support children's ability to live within expected norms of behavior. For example, hitting or biting others and destroying objects of value during play are behaviors that children sometimes use to express themselves before they develop other skills (self-regulation, language, etc.). Consequently, there are times during children's play that teachers assume the role of guide to the classroom expectations or "house rules," especially when children are very young or new to group care. Doing so means **acknowledging in clear words what appears to be the child's feeling, intention, or desire and stating clearly what the child may do and what the child may not do.** For example, a teacher might say: "Lucas, you're angry because you want this tricycle, but Cecil is still using it. You can ask, 'Please let me use this tricycle.' I will not let you hit him, though. Hitting hurts him." In this response, the teacher acknowledges the child's feeling and intention, clearly names what the child did that was not acceptable and why, and advises the child on what they can do that is acceptable if this situation persists or reoccurs.

As children move from being toddlers to preschoolers, they can be encouraged to be more reflective and use a process in cases of conflict. This process needs to be taught to children and practiced when they are not experiencing a conflict, so that they can learn about alternative actions when they are not in agreement. If the children in the previous example were three-years-old and familiar with this conflict-resolution process, the teacher might ask, "What is happening?" Lucas: "I want the bike." Cecil: "I'm on the bike." The teacher could respond: "Hmm. You both want the bike. And how are you feeling Lucas?" "I'm mad," Lucas declares. "And what about you Cecil? How are you feeling?" "I want to ride the bike." The teacher asks, "So what can you do?" At this point, the teacher is the neutral witness, not the

judge and jury. The teacher waits to see what the children suggest trying, guiding them to consult a list of conflict-resolution solutions the class has previously created that is posted on the classroom wall, if needed. Then the teacher summarizes: "So you asked Cecil to use the bike and he said 'no.' Now you are going to wait until he finishes. That seems like a good solution. You are good at solving problems. What are you going to do while you wait?"

Sometimes children encounter problems during play that come about as a result of frustration or conflicts with the physical environment, for example, a tool that does not seem to work or an object that gets stuck and is hard to remove. **Teachers support children in such situations by helping them attend to the source of the problem,** for example by noting: "Oh, look, the rope is stuck in that little crack. Do you see it?" In many cases, such a suggestion prompts a closer look and is sufficient to help the child solve the problem on their own, that is, to complete their goal, what Hawkins compares to completing an electrical circuit (2002). If this frustration appears to be happening frequently for an individual child, helping the child identify that feeling of frustration, encouraging them to take a deep breath, and then reminding them of ways they have looked for the source of the problem before can help the child develop skills for coping with the experience.

Facilitating caring connections in play. Children's social conflicts in play often involve strong feelings. The ability to notice and respond to the feelings or intentions of others transforms over the course of childhood. A young toddler, upon seeing someone in distress, will often act to alleviate that person's distress. An older toddler might offer comfort and help to a distressed friend, including sharing a favorite toy as a means of helping the friend cope with sadness (Zahn-Waxler et al. 1992). Children's awareness of the feelings and intentions of others, evident in infants as young as three months of age, prepares them to be caring friends as they engage in social play with others (Hamlin, Wynn, and Bloom 2010).

Sometimes a child might be cautious about entering play with others or appear to be feeling the sadness of isolation or exclusion from play with others. When this hesitation occurs, teachers can play the role of ally, ushering the isolated child into play with others by entering children's pretend play script. For example, a teacher might grab a cloth bag, throw it over their shoulder, then take the hand of a rejected child and approach the other players, saying: "It looks like you are expecting a delivery. Here we come with a special delivery! Ready to see what we have?" Such a simple suggestion can pave the way for a child to enter the play, with a measure of emotional support from the teacher.

Avoiding unnecessary interruptions. Occasionally, teachers might be called upon to intervene in disruptive play. It is important that they do so with minimal intrusion. It may be enough to move physically closer, or to ask, "how can you use that shovel safely?" In fact, disruptive play is minimal when group expectations are clear and play spaces are arranged with engaging materials that invite complex play. When children are invited to take on playful and engaging tasks during daily routines and encouraged to find solutions to the conflicts that arise, their sense of power and responsibility results in fewer disruptions. In the same sense, when children are respected as communication partners during interactions related to conflict resolution or during group conversations, disruptions are rare. In other words, when

each of these contexts for play-based learning is thoughtfully planned, the play flows, having its own rhythm and time, with little need for adults to interrupt it.

Observing, Documenting, and Interpreting Play

Teaching and learning within a play-based curriculum requires that teachers observe the play, note what occurs, then reflect on and interpret what they see as a guide to what to do next in support of the curriculum. An example of this approach can be seen in the following observation from an infant-toddler teacher (Maguire-Fong 2015, 35–36):

Observation: Patrick crawls toward one of the new baskets, grabs it, and waves it back and forth, watching it move. He mouths the curved edge and then drops it. It lands upright and wobbles on its circular bottom. Patrick stares at the basket as it wobbles round and round, carving a small circle, before slowing to a stop. He retrieves it, rolls onto his side, and, with eyes glued to the basket, drops it onto the floor again. It wobbles in a circle as before and then slowly comes to a stop. With open palm, he taps the edge of the basket and sets it wobbling again. He watches it settle to a stop. Again he taps the edge, this time much harder, and watches as the basket flips over. Now upside down, the basket is motionless. Patrick slaps his hand onto the basket. It remains still.

Interpretation: Patrick appears to be gathering information about the basket. He then experiments with what he can make it do—acting on it and watching it react. He tests to see whether he can repeat an action. It is as if he asks: "So what happens when I push down on the edge of this basket? It wobbles back and forth! Can I make it happen again?" Patrick is constructing a relationship of cause and effect. He appears to have an idea, "If I drop the basket or even just slap it, I can make it move in an interesting way."

In this episode of play, the child acts on the object and observes how it reacts to learn what it is like and how it behaves. As he does so, he is gathering information about the physical properties of the object and how one action relates to another. The former is what Piaget describes as physical knowledge, and the latter what he describes as logical (logico-mathematical) knowledge—how one thing or event relates to another

(Kamii and DeVries 1993). As infants and young children play, they gather information, organize it within their brains, and, in doing so, build ideas and concepts. Much like scientists engaged in research, infants and young children form hypotheses—informed guesses—as they play, in this case: "If I push down on it with force, I think I can make it wobble. I'll try it to find out." Beginning in infancy, children build theories about how things fit in, fill, and move in space. In the preceding example, from an infant's point of view a theory begins to be formed: round objects can be made to move in a spinning fashion, but angled objects cannot. In time, such theories give rise to an understanding of principles of physics.

Teacher as researcher. Just as infants and young children observe what happens in play and form hypotheses and theories, so do teachers in researching children's play. They observe and listen to children at play, they notice what children do and how they relate one thing or event to another, and they reflect on and interpret what they see, building ideas about how children are learning and how to best support their learning. They form hypotheses: "If we add a collection of some round and some angled containers to the play space, we might prompt more investigation of how round objects, as opposed to angled objects, can be made to spin in a circular way. We don't know for sure if infants would do this, but let's try it and find out."

Observing and documenting. Children are intentional in their actions and in their play. By watching closely and listening with care, teachers and other adults discover clues that can be used to piece together what children's thoughts, intentions, or feelings might be. When teachers observe children's play and hold memory of it in some form, it is rendered visible (Rinaldi 1994). The term **"documentation"** is used to describe a variety of ways to hold memory of what teachers hear and see when mindfully observing children's play and interactions. Taking notes, photographs, or videos or collecting samples of children's work are all ways of documenting play.

Documentation preserves evidence of what children do and say and provides clues to their thinking. It also provides evidence to support concepts and skills that might be emerging or that children might be mastering (see figure 4). As Jones and Reynolds explain, "The teacher looks and listens for the 'key words' and images that ... erupt from the volcano of the child's emotionally laden experiences" (2011, 126). Building on the evidence they acquire as they observe children's play, teachers form theories about how the children in their care are learning in response to the contexts they encounter.

To understand how children are learning and how to best support them in doing so, a series of three questions can be used to guide an observation of children's play (see figure 4; Maguire-Fong 2015). The first question to ponder is, **"What do you notice?"** Faced with a feeling of uncertainty about what to look for when observing children's play, it helps teachers to simply watch to discover what draws their attention. When something strikes them as significant, they can consider documenting it to hold it in memory and share it with others at a later point in time.

Reflective dialogue: interpreting the play. The beauty of documentation is that it can be readily shared with others—whether members of a teaching team or members of a child's family or the child themself. For example, teachers can use photos and video clips to engage children in telling their own stories. Written observations that are descriptive and factual paint a clear picture of what children do and say, as do photos or video clips of play. Both hold evidence of children's thoughts and ideas. When shared with others, documentation communicates what occurred within the play and serves as an invitation to reflect together on what the

play reveals, interpreting what the feelings, ideas, and intentions in children's actions or words might be.

To document means to write a clear, vivid description of what is seen or heard during the play or to take a series of photos or a video clip of the play. A second question emerges while observing an episode of play, **"How are children revealing their thinking and feelings?"** This question prompts reflection on what the child's behavior is communicating. What might be the significance of what was observed—**"what ideas, intentions, or feelings appear to be motivating the play?"** When teachers reflect on and interpret the play, they suggest possibilities for what a child might be intending, feeling, or thinking, with ideas that begin like, "I wonder if they are thinking that …" or "Perhaps they wanted to …"

When teachers or parents review together the photos, videos, or observational notes of a child's play, they engage in a reflective dialogue. The same question that initiates an observation of play works well to initiate a reflective conversation around documentation—"What do you notice?" Very often, what strikes one person who reviews documentation may be quite different from what strikes another person who views the same documentation. This is the value of shared reflection on observations of children's play—the ideas of one can inform and build on the ideas of others. The second question used during the original observation—"How are children revealing their thinking and feelings?"—can be used during a reflective dialogue as a way to interpret what transpires during the play, that is, what appears to motivate the play, what script appears to be forming within the play, or what expressions, feelings, or thoughts are revealed in children's actions or expressions.

Figure 4. Documenting Children's Play

Reflective Planning: Observing and Documenting to Guide Next Steps	
Observation (What do you notice?)	**Interpretation / Reflections / Next Steps (How are children revealing their thinking and feelings?)**
Deante cries when Colleen is absent from the room. He cries at the end of the day when she leaves, and he cries for long stretches when she takes her breaks.	**For Deante, his primary care teacher Colleen is his special, trusted person. When she leaves, he cries in sadness. Will a photo of Colleen help him cope with her leaving?**

(Source: Maguire-Fong 2015)

A third question emerges as a reflective dialogue around documentation continues: **"What might we do next?"** It is this question that guides the next steps in curriculum planning, generating possible ideas for what additional materials to add to the play space, modifications that might be made to the daily routines as invitations to children to participate in new ways, or specific conversations or interactions to extend the play or expand the learning. These can be recorded on a simple curriculum planning web that starts with a planning question written in the middle of a blank page that serves as a prompt to generate ideas for new contexts to help children go deeper in their play or their investigation (Jones and Nimmo 1994; Maguire-Fong 2015). Figure 5 shows an example of a planning web with possible ideas for inviting children to investigate snails and their habitat.

Figure 5. Planning Web

A Plan of Possibilities

Paint a cardboard box to serve as a pretend play snail shell.

Collect discarded snail shells and put in sand table with leaves and grass.

Create a snail habitat in terrarium in science area.

With children's drawing and stories, make a book.

How might we offer children and opportunity to get to know snails?

Add snail helpers to helper chart.

Introduce in large group circle a slippery snail chant to play with the /s/ sound.

Find children's books about snails for science area.

Experiment to see leaves/flowers snail prefer.

Look for baby snails to examine.

Extending the play. As teachers observe and listen to play, they collect ideas for extending and adding complexity to the play (Reynolds and Jones 1997). They consider how they might offer new ways that children might **revisit** the play. For example, children might draw images of what occurred, dictate the story of what occurred as they view photos taken during the play, or revisit the play using new and related materials and props. A child's line drawing, like the drawing in figure 6, can be copied and reproduced for other children to build on, or a child's drawing or a photograph can be projected onto the wall for children to experience in a larger-than-life context.

In this way, an investigation can continue over a long period of time, sparked by both children's and adults' interest and taking full advantage of what Loris Malaguzzi, the founding director of early childhood schools in Reggio Emilia, Italy and founder of the Reggio Emilia educational approach, called children's "hundred languages" of learning, or the many ways

that children express what they are thinking, feeling, and interested in communicating (Edwards, Gandini, and Forman 1998; Jones and Nimmo 1994). Through talking, singing, dancing, painting, building, poetry, acting, and so many more expressive languages, children share their joy and process of learning. As Malaguzzi laments, adults so often restrict children's expressiveness, what he calls "stealing the 99," and build barriers that children will continue to resist through their play and other creative forms of agency (see his poem "The Hundred Languages of Children" below). Malaguzzi was passionate in his belief that nothing in a school should happen without joy. He saw play and learning for young children as inextricably linked.

The Hundred Languages of Children

No way. The hundred *is* there.

The child
is made of one hundred.
The child has
a hundred languages
a hundred hands
a hundred thoughts
a hundred ways of thinking
of playing, of speaking.

A hundred always a hundred
ways of listening
of marveling, of loving
a hundred joys
for singing and understanding
a hundred worlds
to discover
a hundred worlds
to invent
a hundred worlds
to dream.
The child has
a hundred languages
(and a hundred hundred hundred more)

but they steal ninety-nine.
The school and the culture
separate the head from the body.
They tell the child:
to think without hands
to do without head
to listen and not to speak
to understand without joy
to love and to marvel
only at Easter and at Christmas.
They tell the child:
to discover the world already there
and of the hundred
they steal ninety-nine.
They tell the child:
that work and play
reality and fantasy
science and imagination
sky and earth
reason and dream
are things
that do not belong together.

And thus they tell the child
that the hundred is not there.
The child says:
No way. The hundred *is* there.

– Loris Malaguzzi (translated by Lella Gandini)

Source: Edwards, Gandini, and Forman 1998, 3

Figure 6. Child's Line Drawing That Can Be Revisited for Further Play

Teachers sift through the ideas on the planning web and decide which option or context to offer next to support children's play-based learning. When teachers plan play spaces, daily routines, and everyday conversations and interactions as contexts for learning, they invite children's participation as researchers in each new context. As children research, teachers become researchers as well, seeking to discover children's ways of learning and their ways of making visible their concepts, skills, and feelings (through play, drawing, acting, painting, dancing, or other languages of children). Out of respect for children's amazing capacity to learn within inventive and

constructive play, teachers adopt a **stance of inquiry**—they seek ways to improve one's practice by identifying problems or challenges and asking questions of themselves and others to explore possible approaches, develop plans, gather data, and evaluate for results. A plan becomes a plan of possibilities, led by a **planning question**, for example, "What ideas will a small group of children have for creating a snail habitat?" (see figures 7 and 8).

Figure 7. Documentation of Creating a Snail Habitat with a Planning Question

Planning Question What ideas will a small group of children have for creating a snail habitat?	
Observation	Reflection

Figure 8. Documentation of Offering a Photo with a Planning Question

Planning Question: When he is missing his favorite person, how will deante respond if we offer him a phot of her to carry?		
Observation	Photos	Reflection
As Deante held Colleen's photo in hand, his crying softened. He kissed it and then held it out to reacher Ann Marie, gesturing for her to do the same. His crying stopped and he carried the photo into the play area.		The photo appeared to be a concrete way for Deante to "hold Colleen in mind," and, indong so, to cope with the sadness of her being gone. (Self-regulation)

(Source: Maguire-Fong 2015)

Within group care settings, teachers prepare an assortment of planning questions simultaneously. Some planning questions relate to materials being added to the play space, which prompts teachers to watch to see who decides to do what with those added materials. Some planning questions relate to modifications to the daily routines. In most classrooms, such plans will involve all the children, since everyone participates in routines like handwashing, meals, and arrivals and departures. Some planning questions relate to conversations and interactions that will occur during the day, and some of these affect all the children simultaneously, for example, a plan to read a story to the full group at group gathering time.

Other planning questions may affect a small group of children, for example, those who assemble to build a snail habitat in the science area. Other written plans may be specific to just one or a few children, for example, a plan to support toddlers in learning what to do instead of biting when frustrated or angry.

Extending the play: Supporting children's ideas for creating snail habitats

Planning question: "What will children do when given a chance to compare snails with millipedes?"

Planning question: "What will children do when given an opportunity to use pretend insects with a light source?"

Planning question: "What strategies will children use when invited to set the lunch table?"

Planning as an emergent process. When teachers prepare new contexts for play, they are open to the many possibilities that children might choose as they explore, invent, connect, transform, or represent within the new context. Teachers observe to see what transpires in the play, observe significant aspects of what occurs, and generate reflections and interpretations of what they observe in the play. In this way, the curriculum responds closely to children's inquiry and is dynamic—it captures the power and the potential of children's play to engage children's minds and

to support them in building increasingly more complex and varied concepts and skills (Katz, Chard, and Kogan 2014). As Jones and Reynolds describe curriculum: "Planning is an emergent process in which play has priority. The outcome is an emergent curriculum—one in which both adults and children exercise initiative and make decisions" (2011, 94). Planning is a shared endeavor that includes children, families, and teachers.

Naming the Learning in Play: Assessment

Documenting children's play gives teachers the evidence they need to assess children's progress in building desired concepts and skills. Children reveal their understanding and mastery of concepts and skills within their play, when supported by thoughtful play environments and when invited to be active participants in daily routines, conversations, and interactions. The documentation presented earlier in this chapter on Victor, who on his own assembled a variety of vehicles and play animals, reveals multiple concepts and skills. The evidence for these skills is held within the written observation—his understanding of number, of classification, of sequence and order, as well as his ability to use play materials to represent or to tell a story.

The following is an observation of three-year-old children investigating snails on trays in the science area. Within these brief notations can be found evidence for progress across a range of concepts and skills:
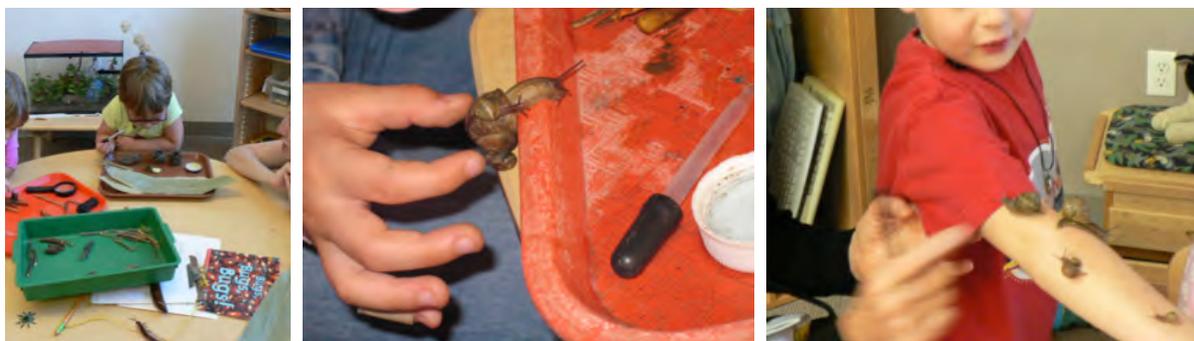
- Jamie resisted touching the snails but stayed nearby and watched Raul let the snail crawl on his arm.
- Miguel and Kasey assembled bits of bark and leaves to make homes for the snail families.
- Jesse notices Nicole's tray has more snails than hers does.

- Petra counts six snails on her tray and tells David she has more than he has. David counts, "1, 2, 3, 4, 6, 8. No, I have 8!"

- Joaquin arranges grass, leaves, and twigs and declares, "This is their home."

- Annaliese and David measure the slimy snail trails using lengths of yarn placed nearby. "Look, he went the farthest from home!"

A single observation will often provide evidence of more than one desired concept or skill, making play-based learning a powerful form of authentically assessing children's learning. This observation of children's play with snails reveals evidence of young children's counting, their ability to represent and create narrative ("this is their home"), an awareness of habitat (a key scientific concept), skill in using a rudimentary form of measurement, and an ability to work together to complete a task. Of most value to busy teachers, the same documentation that informs and guides curriculum planning also provides the evidence they need to support periodic, formal assessment. Desired Results Developmental Profile (DRDP) Assessment measures reflected in the following scenario are inclusive of multiple domains and measures. (The DRDP includes measures of young children's knowledge and skills in the domains indicated in the following scenario: Approaches to Learning–Self-Regulation (ATL REG), Cognition, Including Math and Science (COG), History–Social Science (HSS), Language and Literacy Development (LLD), and Social and Emotional Development (SED):

- Jamie resisted touching the snails but stayed nearby and watched Raul let the snail crawl on his arm. **DRDP measures: LLD 3, SED 4, COG 9, COG 11, HSS 3**

- Miguel and Kasey assembled bits of bark and leaves in order to make homes for the snail families. **DRDP measures: ATL REG 4, ATL REG 7, SED 4, COG 11**

- Jesse notices Nicole's tray has more snails than hers. **DRDP measures: SED 4, LLD 3, COG3, COG 4, COG 9**

- Petra counts six snails on her tray and tells David she has more than he has. David counts, "1, 2, 3, 4, 6, 8. No, I have 8!" **DRDP measures: SED 1, SED 4, LLD 1, LLD 2, LLD 3, LLD 4, COG 3, COG 4**

- Joaquin arranges grass, leaves, and twigs and declares, "This is their home." **DRDP measures: LLD 3, COG 9, COG 11, HSS 3**

- Annaliese and David measure the slimy snail trails using lengths of yarn placed nearby. "Look, he went the farthest from home!" DRDP measures: ATL Reg 4, SED 4, LLD3, COG 5, COG 9, COG 10

Excerpt from a letter to families about assessment and play-based learning from a transitional kindergarten teacher:

In Transitional Kindergarten, assessment is an ongoing process based on frequent anecdotal notes from daily observations. Each activity and project is specifically designed to provide opportunities for development of age-appropriate skills. A firm foundation for school readiness comes in the form of play. Play is the essential component for learning in early childhood. Recent brain research shows just how critical it is to have ample amounts of time for free exploration of a wide variety of materials and experiences. Research also shows how the absence of playtime is hindering academic success in many children and even contributing to a rise in sensory, motor, emotional, and cognitive issues.

Cathe Petuya, Transitional Kindergarten Teacher,
Elk Grove Unified School District

Engaging Families in Play–Based Learning

Documentation of children's play, when shared with their families, provides an invitation for families to notice and value play and the learning of desired concepts and skills that happen within it. When teachers share documentation of children's play with families, they invite families to think with them about what their children are learning and possible next steps to extend, complicate, or represent their play, whether at home or in a group care setting. Through shared observation, documentation, and interpretation, teachers, children, and children's families coconstruct the play-based curriculum—a powerful way to engage children's families.

Play, reading, and writing. Some families may be concerned that if their children spend too much time playing, they may not learn. To respond to this concern, teachers can use documentation of children's play and interactions to provide evidence to the parents that concepts and skills revealed within the play are building a foundation for reading, writing, mathematics, science, and the arts.

As children engage with books freely in a well-planned book–story area and as they discover books throughout the classroom—next to the pretend play bed, within the pretend play kitchen shelves, next to a pretend play desk, within the pretend play backpacks—they experience literature-rich play spaces. As they find plenty of recycled paper and notepads alongside collections of marking tools, they experience print-rich play and, in time, begin to experiment with making marks of writing. When teachers collect samples of children's writing captured within a pretend sign-in area near the entry or on a waiting list or a helper log, they gather evidence of children's progress—documentation that is easily shared with parents.

Teachers encourage play-based writing with children as they model writing throughout the day—writing messages to remember together what children ask of them, scribing children's stories dictated to them in play, helping children make signs to tell others to "save" a block construction still in progress, or writing a letter to thank the janitor for finding the lost ball thrown into the overhead light fixture. As they do so, teachers use large, clear print to call attention to what they write, naming each letter aloud as they write it, if time allows.

As children show interest in participating in writing tasks, teachers accept their attempts at making marks and writing while building children's confidence in writing, irrespective of what the marks look like. It is through such play-based experiences that children come to see themselves as readers and writers long before they actually read and write. Capturing evidence of children's spontaneous writing that occurs within play—whether it looks like scribbles or well-formed letters of the alphabet—is critical in sharing the story of how young children make sense of the complex code of print.

Consider the documentation in figure 9, gathered by a teacher in a toddler classroom during children's play.

Figure 9. Naomi's Writing

I set out paper and large pens in the toddler room. Naomi arrived and made large squiggles on a paper. I asked if I could write her name on the paper. She nodded. As I wrote each letter of her name, I said each letter name aloud. Naomi watched me and then, with her pen, began to make discrete marks, lifting and dropping the pen on the paper. As she did so, she softly repeated "a, o." She continued making these marks and saying these letters for a minute or so.

The teacher in this example recognized that Naomi was revisiting some of the actions and words she had heard when teachers had written her name. Teachers in this program adopted a strategy of getting the child's attention

and telling the child what they were about to do before writing the child's name, and as they wrote the name, they said each letter as they formed it. Because these toddlers had access in the play space to a basket of recycled paper and pens secured to the table, they were free to playfully explore tools of writing whenever they wished.

As Jones and Reynolds point out, "Young children's greatest strength in the acquisition of knowledge is their passion for play" (2011, 125). Teachers can honor the creativity and the learning that happens within play by creating with children classroom books based on the scripts that emerge within the play. When teachers make these books available in the play space, children can revisit their play. These books not only support children in becoming readers and writers, but they also build a shared culture, as children, families, and teachers revisit together the stories of their play.

Diverse family values and play. Seeing play as integral to learning is not a universally held value among families (or even teachers!). When families come together in group care settings, some may value play as an important way for children to learn key concepts and skills, while others may not. Depending on the cultural context, play may be seen as something children do on their own, with no adult involvement, or it may be seen as an experience that is orchestrated by adults. Cultural context also influences what materials children have access to as toys. In one cultural context, children might play with objects sold specifically as "toys," with some given the added label "educational toy," while in another context, children might play with everyday objects commonly in use in the home or community, with little focus on commercial toys.

Culture influences how adults see their role in children's play. Some adults may see their role as setting up the play and then letting children play with the materials as they wish in their own way. Others may feel it is important to model for children how to interact with play materials. Some may value the interaction a child has with play objects, with the adult taking more of a hands-off attitude, while others may value the opportunity to show or teach the child what the play object can do. These differences may lead to a difference of opinion among teachers and between teachers and families. In some family settings, those caring for babies may put more focus on interactions with people than on interactions with objects (Gonzalez-Mena 2008). Families who share this perspective may be alarmed when

they see infants left to play on their own in a play space on the floor while caregivers remain at a distance, supervising the babies yet simultaneously involved in doing other tasks.

In some group care settings, teachers may place a high value on using found materials commonly used in everyday living to prompt children's play and learning, and they may consequently discourage the use of commercial toys, many of which they see as having limited possibilities for learning. Some families may see the use of "ordinary objects" and especially the use of found materials and recycled materials as limiting, short-sighted, and even disrespectful, and they may believe that commercial toys bring greater value with respect to their assumed potential for teaching and learning.

Some families may be frustrated at the messiness of most of the play in group settings. Toddlers who use paint or play in wet dirt may soil their clothes, which may be concerning to some parents (and teachers) who value cleanliness and do not understand or even value the learning that might come from using paint or mixing water with dirt. Others might be upset when they discover their toddlers were allowed to play with water outside on a slightly breezy day. They fear that their children, who were exposed to the air while playing in cool water, might get sick as a consequence.

Other cultural conflicts relate to conversations and interactions, with some adults valuing verbal exchanges during play as a way to encourage children's learning, while others give greater value to nonverbal interactions in which they model for a child how to do something in play, expecting the child to watch closely in order to learn (Correa-Chávez, Mejía-Arauz, and Rogoff 2015; Rogoff 2003). When teachers promote verbal strategies while helping children negotiate conflicts, they may unknowingly be asking children to behave in ways that might be discouraged within the home context, where confronting others directly might be considered disrespectful.

Some families are worried that their child will be behind because of individual differences, disabilities, or speaking another language at home. These families are concerned that their child "learn," which they may see as requiring more structure and teacher direction. The family members' own experience of school may have led them to believe that play is extra rather than central to learning.

When working with families and with coworkers whose backgrounds and perspectives may differ, being open to multiple points of view is critical. For teachers to be able to share with families what children are learning through play, they should first listen carefully to what the child's family member has to say in order to understand the underlying intent or concern the family member is sharing. Listening well to hear the underlying intent or concern prepares teachers to verbally acknowledge the family member's concern or intent. Acknowledging the feelings of the other is an important first step in respectfully addressing cultural conflicts. When there are hard feelings or conflict, striving to see another person's point of view and to acknowledge what might be their concerns, goes a long way toward diffusing cultural conflicts. As Gonzalez-Mena advises, being open and humble is key to being a successful teacher. She points out that teachers serve in a position of power and should consequently be mindful of how they wield that power, being careful not to inhibit others, whether families, children, or coworkers (2008). She notes the importance of being mindful of how one reacts when a child needs help and how others may react differently. Some might take over, while some might simply offer just enough help to facilitate the child solving the problem themself. Some might respond verbally, while others might respond nonverbally by modeling what to do. **Because various responses can be seen to have value, depending on the cultural context, it is important to be open and humble, knowing that there is always much more to learn.**

Acknowledge, ask, and adapt:

When issues come up that may involve cultural differences, use the three-step procedure of Acknowledge, Ask, and Adapt. To acknowledge is to communicate one's awareness of the issue, to convey sincere interest and responsiveness, and to involve family in seeking a joint solution. To ask is to learn about the parent's precise point of view by restating what one thinks the parent is saying, and

paying attention to both verbal and nonverbal responses. To adapt is to work with family members toward a solution by searching for areas of common agreement and negotiating around the important issues (CDE 2016a, 11).

Example Dialogue Between Two Teachers

Seated with four toddlers at the lunch table, the teacher, Angelina, watched as twenty-month-old Taylen tipped his drinking glass and smiled as the small amount of milk remaining in the glass puddled on the table. Taylen lifted his hand ready to slap the milky puddle, but Angelina gently and swiftly held his arm and, with a washcloth, deftly mopped the spill. She admonished, "Taylen, the milk is for drinking, not for playing. Please do not pour it on the table." Surprised by her quick actions, Taylen frowned at Angelina and cried out in protest.

Beth, Angelina's coworker, watched this exchange and silently wished that Angelina had not intervened so abruptly. She did not want to offend Angelina. She understood Angelina's response because she knew how important it was for Angelina to avoid messes at the meal table and was well aware that many of the children's parents shared this concern. Beth was more tolerant of spills, yet she knew that neither the teachers nor the parents wanted Taylen's actions to continue because cleaning up spilled milk was a loss of valuable resources and took away precious time. Though having different approaches in mind, everyone shared the same goal: to help the children learn how to successfully use eating utensils.

Beth wondered whether she and Angelina might use this encounter to support their own learning as well as the children's learning, so she decided to share her thoughts with Angelina. She began by saying, "Yikes, another spill! Lessons learned, I guess." She paused before continuing, "You know, I am wondering if Taylen was still enjoying filling and emptying, just like he was doing with cups at the water table. Maybe we can put Taylen's idea at the center of a planning web." Angelina gave her a quizzical look, and Beth continued, "Taylen, in a way, was experimenting with the liquid pouring from the cup, right? For us, this was OK at the water table but not at the meal table. So, what if we offer the children opportunities to figure out and make sense of when dumping and filling is OK, especially with liquids, and when it is not, as with a valuable resource like food. In other words, we could put Taylen's little experiment at the center of a planning web."

Angelina smiled at this suggestion, picking up on Beth's idea, "OK, I see where you are going. We could think of what we might offer the children to help them make sense of when it is OK to pour liquid in and when it is OK to pour it out. Is that what you are thinking?" Beth smiled in agreement. "It could be fun and it might work. We could offer lots of opportunities to fill and empty around water play and during meals offer ways to invite toddlers to successfully pour liquids into cups. This would help them make sense of each situation. And in the end, it might mean fewer spills for us to clean up during meals, a win-win situation!"

Traveling Companions in Children's Search for Meaning

Carlina Rinaldi, an educational leader in the highly regarded early childhood schools in Reggio Emilia, Italy, offers the following commentary on the adult's role in play-based learning (2006, 21):

> The search for meaning begins from the moment of birth, from the child's first silent "why," and continues all through life. … Young children make enormous efforts to put together often-disconnected fragments of experience to make sense of things. They persevere with their search stubbornly, tirelessly, making mistakes, and often on their own. But while engaged in this search, children ask us to share the search with them. We as teachers are asked by children to see them as scientists or philosophers searching to understand something, to draw out a meaning. … We are asked to be the child's traveling companion in this search for meaning.

As teachers and parents assume the role of traveling companions to meaning-making children, it helps to keep in mind that play and learning are "mutually supporting" and that **creative, inventive, playful children are best supported in learning by creative, inventive, and playful adult companions** (Jones and Reynolds 2011, 125; Rinaldi 2006). How can teachers and administrators be supported in being creative, inventive, and playful? As early childhood professionals often experience high levels of stress, it is essential that teachers and administrators create ongoing self-care plans that help them to fill up their emotional reserves and replenish their energy, a topic that is discussed further in chapter 6. It is also important that administrators strive to create positive working conditions in their programs and schools that are trauma informed and value the health and wellness of all staff members, a process that is described in more depth below.

The Important Role of Administrators and Principals in Supporting Play–Based Learning

Administrators in early childhood programs, including school principals, program directors, and site supervisors, play a critical role in the successful implementation of play-based programs. Although administrators must juggle many responsibilities, their role as **instructional leaders** is the most important one in supporting play-based learning (see text box below). It is essential for any play-based early childhood program to have ongoing support from a strong, informed, and effective instructional leader administrating the program.

**The Many Important Ways Instructional Leaders
Can Support Play-Based Learning**

- Knowing their individual staff members' strengths and areas that are in need of further learning and improvement to work effectively in a play-based program. Using this knowledge to identify resources to support each staff member's professional growth and development goals and needs towards creating play-based curriculum and instruction.

- Having proficiency in understanding child development and early education research. Understanding how children learn and develop, the role that play has in these processes, and the adult behaviors and environmental factors that optimally support children's learning and development.

- Being able to clearly communicate the rationale and research base supporting play-based learning in early childhood programs. This role includes providing staff and families with research-informed information on best practices and current trends in child development and early education—for example, current issues and events that inform the ongoing development of responsive curriculum, effective assessment, and effective pedagogical strategies for working with diverse children and families and their teachers and caregivers.

- Having a visible presence in the early childhood program, being accessible to answer questions about play and children's learning, and offering active support to staff, children, and families.

- Modeling valued behaviors including cultural humility, use of inquiry and a learning stance, attuned listening, self-regulation, and optimism and belief in the promise of every child to succeed through play-based learning.

- Having in-depth understanding of developmentally appropriate observation-based assessment of young children. Understanding how to appropriately use formative and summative data to evaluate children's growth and development and make responsive adjustments to play-based curriculum and instruction as needed.

- Acknowledging and expressing appreciation for staff members' learning and growth and accomplishments as teachers in dynamic play-based programs.

- Ensuring that the environments do not require adults to enforce behavior management systems that undermine trust in child-teacher relationships and negatively impact students' opportunities to learn through play. If a rigid behavior management system is being implemented in the school or program, evaluating its impact on children's opportunities to engage in playful learning is essential. Some widely used behavior management systems include methods that publicly shame children, which is likely to undermine their ability to build trust or to feel safe in the presence of their teachers. Such environments can also limit or prevent children from engaging in exploration and being willing to take risks and make mistakes. Without addressing these and other consequences associated with rigid behavior management systems (that many administrators mandate and are common practice in elementary schools), efforts to implement play-based learning will be largely ineffective.

◆ Reflection Questions for Administrators

- What skills, knowledge, behaviors, or dispositions are strengths of your program staff that you can build upon to implement an effective play-based program?

- What skills, knowledge, behaviors, or dispositions do you need to provide professional development to strengthen in your staff so they can successfully implement a play-based approach?

- In what ways are you prepared to share and discuss research-based information about the importance of play in early childhood development and learning with families? What do you need more information about?

◆ Reflection Questions for Teachers

- How is your program administrator providing support for your current or desired play-based program?

- What specific forms of support would you most like to have from your administrator related to the planning and implementation of a play-based classroom?

- Do you have any resources on child development or early childhood or specifically on play that you value and can share with your administrator?

Learning About Child Development and Best Practices in Early Childhood Education

In California, administrators of elementary schools are not required to have training in early learning and are not expected to be familiar with the fundamental and essential nature of play for young learners.[5] While

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5   The McCormick Center for Early Childhood Education introduced a study highlighting the differences between the qualifications of early learning administrators and those of elementary school principals (2017). It reported that "most states are slow to establish policies that require principals to acquire leadership knowledge and skills specific to pre-K children." The full New America study can be accessed at https://www.newamerica.org/in-depth/pre-k-leaders/.

some administrators might have that background and be able to draw from it to support play-based learning, others might need to find ways to draw on the combined strengths of their staff members. For instance, teachers are required to have a robust understanding of child development. Early childhood educators should be invited to share their knowledge of early brain development, developmental science, and the use of play to support children's learning with administrators who are less familiar with early childhood pedagogy. **Creating awareness of play's place in the day begins with those already well informed—teachers and professional early learning organizations.** While it might be argued that this responsibility should lie with districts, county offices, or state agencies, the most effective advocates are those who already know about the essential role of play in children's learning and development—early childhood teachers. A new book, *Principals as Early Learning Leaders: Effectively Supporting our Youngest Learners* includes a comprehensive discussion about the role of play in early childhood environments for principals and other school leaders and administrators.

Creating a Climate of Trust, Respect, and Collaboration Between Administrators and Early Childhood Teachers

Administrators are key in creating a work climate that promotes collaboration and trust. An **inquiry model for administrator–teacher meetings**, for instance, can open the minds of all to the strengths and concerns of others. Instead of bringing in outside speakers or "experts," administrators can begin by asking their teachers for ideas about areas of concern. Everyone has a stake in the work, experiences, and ideas. By taking an inquiry stance and supplying positive guidance, the administrator learns and gains credibility. When conversations veer off topic, administrators can create a "parking lot" (a list of additional topics noted on a large piece of chart paper or other such visual reminder) to record items for future discussion, respecting everyone's perspective and contribution. Many administrators choose to begin the year by setting group norms for such discussions—agreeing to speak with respect and allow others to respond, for example. Additionally, many administrators use reflective supervision to build trust with teachers and staff and to provide them with support by creating a safe space where they can pause to reflect on and learn from their complex experiences working with young children and their families.

Reflective Supervision

Reflective supervision (RS) is a supervisory approach used in early childhood systems based on the belief that learning takes place within the contexts of relationships and that children's and adults' learning trajectories are significantly influenced by the quality of those relationships (Heffron and Murch 2010; Parlakian 2001). At the heart of RS is valuing the creation of a safe and welcoming space for early childhood professionals to reflect on, and learn from, their work in the context of a supportive, trusting relationship with a supervisor or mentor (Heffron and Murch 2010). A guiding principle of RS is that the emotional intensity and complexity of work with children and families requires that professionals have time to pause, reflect, and find support to learn and feel accompanied within the context of a safe, trusting professional relationship (Weatherston, Weigand, and Weigand 2010, 23).

Beyond staff meetings, administrators can also play an important role in creating a collaborative work relationship that promotes close understanding both of where children are developmentally and of play-based learning. Teachers can strengthen collaboration with administrators by, for example,

- inviting administrators to the classroom to talk with the students about their jobs and letting students respond;
- asking them to join a playground activity;
- sharing student work with them; and
- sharing the good stories that arise every day.

Following such an activity, the administrator has the opportunity to share observations and ask questions ("help me understand"). Teachers can reinforce observations by connecting administrator questions to curriculum. For example: "We have been talking about how structures can be made stronger. I noticed that the children were making sure to have thick upright columns to support their building. It's part of our unit on housing around the world." Teachers can also talk about next steps, for example: "We're going to create a panel for the board by the door; we'll have photos, drawings, and children's writing. They're excited about sharing their learning." The

administrator can make a visit to the classroom while the panel is in development and again when it is posted. Such interactions show children, teachers, and administrators that they are in a relationship, which builds trust and confidence, as well as core knowledge.

Although it is time consuming for administrators to work with teachers in this way and, realistically, they cannot engage in this type of communication every day in every classroom, intentional interactions from time to time can nonetheless be informative for the leader and will support the climate for quality play-based learning. These interactions also provide valuable springboards for follow-up activities and questions, for example: "Class, would you like to work together to write a story about our principal's visit?" "Is there anything you'd like me to tell the principal about our work today?" Such follow-up demonstrates to the students that their work (play) has value.

Sharing responsibilities and building trust in each other's areas of expertise. Administrators do not have the time to monitor second by second, or even month by month, everything that goes on in the classroom and on the play yard. Each encounter is an opportunity to practice respect, to give and receive affirmation and guidance, and to strengthen relationships. Wise and successful administrators provide a bridge between classroom practitioners and governance structures such as licensing, accreditation, insurance, and teacher and program evaluations. Often what is provided consists of supporting staff in preventing child injuries through risk management, participating in mandatory reporter training for Child Protective Services, and knowing how to respond during fire and earthquake drills. These are important activities. Also important is sharing with teachers how these structures and processes provide for stability, growth, and positive outcomes.

Administrators also have the responsibility to articulate learning outcomes for teachers and provide instructional guidance and support to ensure that the curriculum supports children in achieving the learning outcomes that the program espouses. This can be an area of challenge and tension, a high-wire act sometimes. Play can be that bridge to address accountability issues, fostering a climate of safety and trust between all parties and diffusing anxiety and uncertainty.

Conversely, **administrators can bolster their knowledge and staff trust by getting information from teachers**, for example, by asking questions such as the following: How do you want me to support your work? What do I need to know? Where do I/you find the most helpful information about early education? Tell me about how you came to do this work. I have studied the information in the core documents given to me by my supervisors, what else should I study? What would be helpful for me to learn? Would you like to teach me something?

Questions can also be directed to help the administrator locate structural and logistical needs for teachers to be able to provide a high-quality, play-based learning. For instance, asking questions about broken items, leaking faucets, unreliable technology, and lack of art materials are the sorts of concerns that are very disheartening to teachers. Teachers must be informed on how to address these sorts of issues and must be able to trust the school leadership to address the needs. In return, the leader must be aware of areas needing attention regarding how teachers plan, lead, and guide their classrooms.

This reciprocity is similar to what is called responsive caregiving in the care of infants, and requires knowledge of "the other." Everyone in an early education setting must be attuned to one another. It takes time and effort, with no shortcuts, to improve the quality of early care and education. Attention, intention, reliability, humility, and courage are required.

When coaching teachers, administrators will find more acceptance if they have taken the time to know the core values of the personnel, including their training, experience, and culture. Effective coaching also includes thought about where and when it occurs. Clear expectations and openness to assess the usefulness and success of the intervention lead to deeper competency. Administrators will be more effective when they are **collaborative rather than directive**. Effective administrators not only provide coaching for their staff members, they also **create a climate in their programs where coaching is valued** and used to support teacher learning and program improvement.

Coaching requires authentic collaboration. To be effective it must be based upon building mutual trust and a respectful relationship and establishing and maintaining a reciprocal coach–coachee partnership. Effective administrators do the following:

- Understand the importance of providing time and space for relationship building among adults—e.g., between teachers and coaches—as well as children across the program.

- Create and maintain the use of strengths-based language in program policies and practices.

- Cultivate the development of a reflective culture within their program and work to secure the time, space, and resources necessary to support coaching.

- Value reflective practice and model ongoing reflection as an important way to create an awareness of one's practice and to continuously improve quality in all aspects of the program.

- Provide reflective supervision to staff in a manner that is consistent with the process and goals coaches are using with coachees to support program improvement.

Source: CDE and First 5 California 2011

Developing Expertise in Observation–Based Assessments

Administrators can provide critical support for play-based learning, but to do so they need an understanding of developmentally responsive assessment in early childhood. Specifically, all administrators should have an understanding of the following considerations.

- **Valid, reliable, and meaningful assessment of young children's learning and development.** Decades of research on authentic assessment in early childhood has identified important criteria for determining whether assessments are valid and reliable when used with young children to document their learning and development. What has been learned? Assessment of young children's skills, knowledge, and dispositions requires observations of children's authentic engagement in classroom activities over a period of time on

multiple occasions, and often with input from multiple individuals who know the child well, including the family or caregivers.

- **Limitations of "snapshot" or decontextualized assessments with young children.** Administrators should be prepared to discuss with teachers and others why snapshot (one-time) or decontextualized (requesting children to display skills and knowledge outside of the daily flow of their play and authentic engagement in classroom activities) assessments of skills and knowledge in young children can be problematic. Snapshots can suggest questions and hypotheses, even evidence of a moment in time and space. However, without a rich context, they are not very useful for assessment. Assessing children is often unreliable and decontextualized assessments may not accurately reflect young children's skills, knowledge, and dispositions because their performance is not necessarily consistent over even short periods of time. Children's learning and development can be more accurately assessed through the collection of observational data over a length of time while they are engaged in authentic activities including play.

- **Children's play as assessment data.** Observations of children's play can provide important assessment data on learning and development across all domains and a wide range of dispositions. This data includes what is being said (clarity of articulation, grammar, language, vocabulary); what kinds of movements are happening (even gait, handedness, use of materials, awareness of the body in space); and what the climate is (collaborative, directed, negotiated, kind, coercive). Knowing what play-based learning may look like at different developmental levels and in different settings can help guide observations of teachers' practice as well as the selection of tools to assess children's learning. The DRDP is an observation-based assessment that acknowledges the importance of using children's play as assessment data in early childhood. (For additional information on how teachers can use play as a context for assessment, see Van Hoorn et al. 2015.)

If more expertise is needed in the administration, documentation, and interpretation of observation-based assessments, many teachers, members of academia, and public agencies are available and accountable

for disseminating information, training, and coaching for developing this expertise.

Another way in which program administrators can support teachers in implementing play-based learning is through **designating a specific time weekly, if not daily, for teachers to share observations of children's play**. During such dedicated time, teachers, along with instructional leaders,

- describe what they notice in the documented observation;
- share their interpretations and reflections on the observed play;
- suggest hypotheses for what might be going on in the play—what they think children might be thinking, intending, or feeling;
- share their questions, concerns, or frustrations with the play, including their attempts to understand the play; and
- consider what to do as follow-up—the next steps in support of the play.

Designating this time requires an **ongoing investment of program funds**, as well as **thoughtful scheduling**. And allocation of program funds and time in this manner benefits a broad spectrum of program components—curriculum planning, child assessment, family engagement, and professional development. Teachers also need **access to a place where they can convene to study the documentation**, and they need ready **access to cameras and computers** or other storage and projection devices to document play and to share the documentation.

Modeling what it means to slow down and observe, interpret, and reflect, instead of giving advice in the name of professional development, has been shown to be a highly effective model of instructional leadership. Modeling how to observe, document, and interpret can happen on the spot during a moment of children's play or later within reflective dialogue while viewing documentation of children's play. When supervisors or instructional coaches or mentors prompt staff to notice what is happening in the play, and when they encourage them to name the play—to describe how children's thoughts and ideas might be revealed in the play—they engage in a powerful form of professional development.

When those in leadership roles, together with teachers, engage in describing how they each see and interpret the play, they think, plan, work, and interpret together, discussing one another's ideas and challenging

these ideas to understand children's thinking. For these conversations to be effective, everyone involved must adopt **the assumption that each person's perspective has value and not assume that those in power have more say than others** (Rinaldi 1994). Thus, instead of interrupting a moment of play or a teacher practice to add a comment, instructional leaders and coaches who use responsive effective practices find ways to watch the play together with teachers. While they do so, they help name the play, describing it in detail and, when appropriate, representing it in some way through taking notes or photographs so that it can be shared later for planning, assessing, or engaging families. Whether observing a moment of play or observing the documentation later, everyone involved, including the instructional leaders, should adopt an attitude of curiosity and inquiry and a willingness to learn from one another.

Communicating with Families About Play–Based Learning

Knowing how families prefer to receive information and providing a variety of avenues for sharing information about a program's play-based learning is key to effective family engagement. Resources might include web-based articles, classroom newsletters, or private accounts on social media platforms that explicitly maintain confidentiality to protect children and families. Periodic morning coffee times and evening meetings with families and teachers to share ideas are useful for feedback and collaboration. As described in the previous section, asking for ideas and questions can relax families and open their minds to what may be unfamiliar about play-based learning.

Families look to the administrator to manage the needs of the physical facility and to ensure that it is clean, safe, and well prepared and that the classrooms and grounds are fully equipped and operational. Updates on these topics can be included during parent meetings and in school communications. Informing families about successful happenings (e.g., how long it took to evacuate during the last fire drill, training on new equipment, changes in personnel) supports a climate of communication and collaboration.

Family playtimes at school are an effective way to introduce and extend families' understanding of play at the center of learning. Programs

can consider offering families the opportunity to play, such as a family game night, a Saturday playground day, a messy play day, or picnics and games in nearby parks. These activities require time and careful planning, but they tend to reap understanding and joy.

As will be discussed in the next chapter, the amount of risk to allow in children's play is a topic that resonates with families, teachers, and leaders. The following examples illustrate the complexity in considering risk. A child can slip in a restroom and suffer a traumatic head injury, yet restrooms are not eliminated. However, recently programs have eliminated swings and teeter-totters from playgrounds, both of which can be used safely when under careful supervision to provide excellent spatial and motor development. Careless throwing of sand can cause eye damage— should sand play be eliminated? Discussions among the members of the school community about safety follow naturally from these questions and considerations when advocating for play-based learning. Families can and will support work in this area if they are included in planning and implementation.

Authentic and respectful conversations within the school community about the nature of play and its value for each and every child will be the foundation for recognizing its essential role. Although research, advocacy, illustration, and public pronouncement about play's value carry considerable weight, it is at the local level that the power of persuasion is most needed. The research about the value of family involvement and understanding of children's learning echoes teachers' learned experiences.

Example of a transitional kindergarten teacher's homework assignment for children and their families to play together (instead of filling out worksheets)

Homework

Students are encouraged to have their own chores to complete at home on a regular basis. Children like to contribute and support their family. This practice goes a long way toward developing personal confidence and a willingness to help others at school.

It is recommended that parents provide many opportunities for students to listen to stories and enjoy looking at books outside of school. This practice will foster a lifelong love of reading.

Research has shown that **students are more successful in school when they have time to play with family and friends**, eat healthy food, and get enough rest at home. There is no evidence that filling out worksheets and other typical homework activities make any difference. In fact, completing homework often becomes a source of additional stress that interferes with deepening family relationships.

You can be certain that your child will be fully engaged in learning in my class. My students work hard all day every day! School tasks are very demanding just like many tasks at adult jobs. It is important for every person to have time for reflection and leisure pursuits, even children. It sets up good habits for maintaining a healthy balance of busy-ness and relaxation. **Have you noticed the proliferation of adult coloring books and yoga classes? I believe children deserve the same sort of options.**

To help you generate ideas for fun activities with an educational twist, I have linked monthly calendars on my blog under the TK Homework tab.

Cathe Petuya, Transitional Kindergarten Teacher,
Elk Grove Unified School District

An innovative approach to engaging with families and guiding them to learn about the value of play-based learning is seen in the kindergartens of Anji County, China. Cheng Xueqin, the lead administrator overseeing the kindergartens across the county, developed Anji Play, an internationally recognized play-based early childhood curriculum. A key tenant of Anji Play is the method of **using play memories as a powerful resource** to remind adults, including parents, of what they learned in play as children and the importance of allowing children to continue to have access to and opportunities for play in their early childhood programs. This approach is described below.

Using Play Memories in Anji County, China, to Help Parents and Families Understand the Value of Children's Play

In Anji County, China, play memories are often used as an effective method of supporting parent education about the importance of play in the kindergartens. Parents and family members are invited to recall their own memories of childhood play. They are asked the following types of questions, **What is the play you most liked in your childhood? What is the play you can remember the most? Why do you think you can remember this type of play so clearly?** The Anji teachers and administrators then guide the parents to talk together about these play memories and to identify the various ways in which their own early development was supported through their play. For example, a father may describe a play memory recalling how much fun he had learning how to climb a tree with another child living in his neighborhood.

Building from this memory, the teachers would help him understand that he was not only having fun throughout this experience but also developing important physical, cognitive, and social–emotional skills, including eye-hand coordination, creative problem solving, and the ability to set goals that required him to take risks. And most importantly, this father would be asked to describe the feelings he associates with his memory of climbing a tree for the first time with his friend.

The majority of adults who recall memories of their childhood play, especially their self-determined play, remember these moments as some of the happiest and most positive experiences of their lives. They

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usually enthusiastically share all of the details, including what they remember seeing, smelling, touching, hearing, and feeling while they were playing.

As a result, after the parents have had the opportunity to participate in these memorable reflections, they are asked one final question by the teachers in Anji: **"You wanted to play when you were a child; why wouldn't you allow your child to play now?"** In this way, play memories are used to inspire parents to understand, at a very personal and emotional level, the importance of play in their children's lives and the critical role they are asked to take in supporting every child's right to experience play in the Anji kindergartens.

Teachers also use play memories to inform their ongoing development of culturally responsive curriculum, especially by the introduction of new play materials that maintain children's cultural heritage. They first identify the materials that adults describe in their play memories—a traditional stone flour mill, a threshing machine, or a bamboo flour sieve, for example—then incorporate these same materials, or replicas of them, into the Anji kindergartens. An adult's memory of the bamboo forests as a special and magical place to live and play throughout her childhood might inspire a teacher to introduce bamboo as a material for children to use in their play. In this way, the teacher pulls from play memories to preserve cultural legacies and construct ideas for ongoing curriculum development and environmental design.

In some cases, parents are involved in constructing the materials they recall in their play memories, for example, one parent built a smaller version of a traditional stove he used as a child. The replica stood in the kindergarten next to a garden where the children could grow sweet potatoes, harvest them, then cook them on the traditional stove. As seen in this example, play memories in Anji help adults remember important aspects of their individual histories while also supporting intergenerational maintenance of important and valued cultural practices.

Using individuals' play memories as the foundation for helping teachers, administrators, and parents to learn about the importance and value

of children's self-determined play is a unique contribution that Anji Play makes to the international community. In the United States, strong value is placed on making authentic connections between children's home and school experiences by inviting families to share photographs, storybooks, and artifacts that reflect their individual family backgrounds and the assets of their communities and cultural heritage. However, using play memories to create these intergenerational connections is an original and thought-provoking contribution of Anji Play.

Anji Play introduces a unique format for helping adults strengthen their understanding of the importance of play in children's lives by guiding them to reflect on their memories and, in doing so, rediscover their own personal experiences with and relationships to play. By having the opportunity to reconnect to the emotions and vivid memories of engaging in play throughout their own childhoods, adult family members in Anji not only gain knowledge about play and how it supports children's learning and development but also become advocates who work in collaboration with teachers and administrators to protect children's right to engage in self-determined play.

By incorporating materials parents remember playing with in their childhoods and inviting families into the kindergartens to help with the construction of materials and equipment, Anji Play also provides a meaningful and sustainable process for engaging families and creating intergenerational, cultural, and community links between teachers and school staff, parents and families, and young children's experiences in the Anji kindergartens. Further, when parents tell children stories about their childhood it builds children's language development and storytelling skills, and promotes reading comprehension. Play memories can also help parents and children to collaborate in creating family books they can read together at home.

◆ **Teacher Reflection:**

- How can you use play memories to engage parents and families?
- What questions do you expect parents to have that you can reflect on in advance?
- How can you use play memories to support culturally responsive practice, introduce new play materials, and inspire adaptive play environments?

Teachers and administrators have essential roles in supporting play-based learning in early childhood classrooms and programs. Teachers need to know how to set up play spaces as contexts for learning. They also need to be skilled in knowing how and when to use a variety of strategies to support and guide children's play. And, critically, teachers and administrators need to know how to observe, document, interpret, and assess children's play. It is essential that they understand child development and learn about research literature to stay current on best practices in early childhood education, especially developmentally and culturally appropriate assessment.

This section has illustrated how administrators play a fundamental role in creating environments that promote high-quality play-based early childhood education. For instance, they are responsible for creating a climate of trust, respect, and collaboration with teachers—an environment that honors developmental science and children's right to play. Administrators are also responsible for communicating with families about the program's commitment to quality and the important role of play in supporting children's learning and positive developmental outcomes. In creating a culture of collaboration between teachers, administrators, and families, the tasks laid out here are distributed and more authentically developed, ensuring practices that are responsive to the needs of children, teachers, and families.

Key Take-Aways for the Early Childhood Classroom

- Teachers support play-based learning through designing play spaces that are inclusive of diverse learners and communities, creating care routines that invite children's active participation, and initiating play and planning interactions and conversations with children that support learning.

- Teachers have many options for supporting and guiding young children's play that range from indirect to very direct roles. Effective early childhood teachers are responsive to the changing developmental needs and interests of individual children and use a range of strategies in dynamic and flexible ways.

- Using loose parts and open-ended play materials supports children in engaging in "what if" thinking which strengthens their skills at risk-taking, problem solving, thinking imaginatively, and generating solutions.

- Teaching and learning within play-based curriculum requires that teachers observe the play, note what occurs, and then reflect and interpret what they see as a guide to what to do next in support of the curriculum.

- Documenting children's play gives teachers the evidence they need to assess children's progress in building desired concepts and skills.

- When teachers share documentation of children's play with families, they invite families to think with them about what their children are learning and possible next steps to extend, complicate, or represent their play, whether at home or in a group care setting.

- Administrators, including school principals, program directors, and site supervisors, in early childhood programs play a critical role in the successful implementation of play-based programs.

Children must take risks to challenge themselves to grow, test their limits, learn how to overcome obstacles, cope with frustrations, and taste the joy and self-esteem-building experiences of success. Learning to take risks is a necessary developmental task. Children become confident, resilient learners when they are encouraged to try new experiences, engage in acceptable levels of risk, and learn from both their successes and their mistakes and failures.

Children take risks as an inherent part of their learning and development. Although adults are responsible for ensuring reasonable precautions to protect children and keep them safe from injury and harm, it is important that they resist an urge to try to create risk-free environments, a task that is impractical and impossible and will in the long run hurt young learners. They should not try to remove every obstacle children will face, nor insist that every new experience they have be so similar to previous experiences that no confusion or frustration can result. As Judith Hackitt, then Chair of the UK Health and Safety Executive, stated in her speech at a 2008 Institute of Occupational Safety and Health event, the goal is not for children to

grow up to be risk averse or worse "risk naïve"; such a state will not prepare them to be successful in their relationships, education, and future careers (Ball, Gill, and Spiegal 2012).

Joan Almon, internationally renowned educator, advocate, and nonprofit leader, champions the many benefits of supporting developmentally appropriate risk in children's play. She writes: "…risk is generally thought of only in physical terms, but it should be understood as a vital part of every aspect of development, not just the physical. Taking a chance that another child will accept you as a playmate or that you can resolve a conflict without adult intervention is a social risk" (Almon 2013, 15).

The Role of Risky Play in Children's Learning

The word "risk" often conjures thoughts of the likelihood of an adverse outcome, including injury. In this chapter, **"risk" is used in a neutral manner—as is done with risk management practice—without suggesting a specific judgment about acceptability** (Ball, Gill, and Spiegal 2012). **Positive or good risks** and hazards in children's play and early learning environments do the following (Almon 2013, 29):

> [They] engage and challenge children, and support their growth, learning, and development. These might include equipment with moving parts, which offers opportunities for dynamic, physically challenging play; changes in height that give children the opportunity to overcome fears and feel a sense of satisfaction in climbing; and natural loose materials that give children the chance to create and destroy constructions using their skill, creativity, and imagination.

Negative or bad risks and hazards have no benefits for children and are often very difficult or impossible for children to identify themselves. Examples include "sharp edges or points on equipment, weak structures that may collapse, and items that include traps for heads or fingers" (Almon 2013, 29). Almon recommends that educators think about risk along a continuum. She introduces a framework to guide educators and parents to consider

how they can provide opportunities for play that support children in taking positive, developmentally responsive risks in their play:

- **Challenging activities/low risk:** Engaging in these play experiences or activities require courage from a child. However, the probability of adverse outcomes is extremely low because significant safety features are built into the experience, for example, a child walking across a balance beam with sand underneath to cushion a fall.

- **Moderate risk:** These play activities provide children with genuine risk that they can assess for themselves and make choices about their level of participation. For example, a child wants to climb to the top of a tall play structure and inches up each day a bit farther than the previous day until one day they reach the top with glee! This activity engaged the child in genuine risk; however, they had agency to choose the level of participation in risk-taking based on self-assessment of skills, confidence, and overall readiness.

- **Advanced/extreme risk:** These play activities require significant practice and advanced skill to participate in safely. Examples include activities that children with specialized skills in gymnastics or skateboarding might engage in.

The goal is to create opportunities for children to learn to engage in self-assessment of their ability to take risks. When children are offered opportunities to engage in free play or child-directed play—especially outdoors—they not only learn about and discover their own strengths and abilities but also practice new skills over and over until they achieve mastery. In this way, they continue to stretch themselves, but not too far. It is rare to see children take risks beyond what they are ready for or capable of doing. Almon has observed in children's play around the world that "as children grow, they embrace risk as a natural part of life and develop a finely tuned sense of risk assessment, an essential skill for survival" (2013, 11).

"Risk has become a four-letter word in the US—something to protect children from at all costs. Yet children throughout the ages played freely in the outdoors with their peers, usually without adult supervision once they reached a certain age. They took on as much adventure as they felt ready for. Injuries occurred, but when we have asked adults to review their play memories, they can think of few children they knew who suffered any serious harm. Bumps and bruises, yes, and even an occasional broken arm or leg, but rarely anything worse than that. And while no one wants to see a child injured, the benefits of experiencing risk needs to be weighed against the harm done by never learning to cope with it. The latter can be truly dangerous. … **Facing risk helps children assess the world around them and their place in it.** Children love to see how high they can climb on a ladder, a tree, or a jungle gym. Over time they see their abilities grow, and they become ever more confident about stretching their boundaries and taking appropriate chances. They also learn about their limits. As they grow older, they apply these lessons in a variety of life situations. **It is time to rethink risk and see its benefits as well as its difficulties** … this does not mean adults should throw out their sense of caution regarding children. But they should examine their concerns to differentiate appropriate concerns from inappropriate fears. It is also important to differentiate between risks that are visible and that children can assess for themselves and hidden hazards, like broken or poorly designed equipment, which children are not aware of. The latter need to be detected and avoided, and that is the responsibility of adults." (Almon 2013, 3 and 11)

In sum, restrictive laws, extensive regulations, and fear of lawsuits have all contributed to the risk-averse culture in the US. Supporting children in having opportunities to participate in risky play and enjoy all the benefits associated with learning to take risks will require addressing the policies and regulations that fuel the current conditions.

Stephen J. Smith, a professor of education at Simon Fraser University in British Columbia, describes the important need for adults to strike a balance between helping children to develop their skills in personal risk

assessment and their responsibility to maintain children's safety. He believes that **one of the most important and helpful choices parents and teachers make is to "know when [their] help is needed and when it is not"** (Smith 1998, 139). Teachers and parents need to work on reducing the messages communicated to children with words and nonverbal behavior that display a sense of apprehension, fear, and danger. Many children in the US, even young children, have learned to feel that risk is not safe or acceptable. They sense worry and concern, which not only reinforces for them that risk is not allowed but also inadvertently tells them that adults do not believe in their capabilities to learn and succeed. Instead, it is important to socialize children to feel comfortable and safe with risks, because risk-taking (e.g., not knowing the answers, exploring possibilities, and making mistakes) is inherent to the learning process.

> Many early childhood programs create daily opportunities for young children to learn to take risks as they play. For example, it is common for children in Montessori, Reggio-inspired, and Waldorf programs to use glassware and ceramic bowls, and real hammers, saws, and nails for woodworking during the course of their daily activities from a very young age. Teachers are sure to keep children safe if glass breaks or a hammer comes down on a tender finger, but children are not prevented from learning how to take risks and handle fragile materials safely.

One strategy that can be helpful for parents and teachers in learning how to manage their fears about children's risk-taking in play is to **carefully observe children's ability to engage in their own risk assessment**. When they take time to closely watch children on a playground, teachers are likely to see children who grow more cautious in their play as they discover the risks involved (e.g., climbing to the top of a play structure). Often, children will practice their desired goal many times. As they develop mastery of skills and confidence through these practice cycles, they will increase the level of risk they allow themselves to take until they have achieved their desired goal. To support children in engaging in this type of successful risk-taking, adults allow children to have repeated opportunities over time to play in the same environment, where they can engage in cycles of incremental risk-taking in congruence with their developing skills and abilities. They also

communicate to children that they see they have many strengths and assets, and are capable of learning anything they set their sights on (Almon 2013).

Allowing children to be responsible for their own risk assessment will require a shift in the cultural mindset and relationship to risk of teachers, families, policymakers, safety regulators, and licensing analysts. Typically, early childhood educators in the United States create developmentally appropriate challenges that allow children to take risks while they are learning. In essence, the teachers take responsibility for managing the amount of risk a child takes and intervene if they determine that the risk turns out to be too challenging for the child's level of development. For example, when the focus is on physical risk, standards in the United States prescribe age-appropriate heights for climbing equipment and specify how to make the equipment appropriately stable for young children without taking individual differences into account.

In presenting children with problems, early educators in the United States attend to the level of challenge to ensure that the learning experience is not too stressful for the child. What happens when adults manage risk in this manner? In effect, adults take responsibility for determining the children's learning. That tendency leads to two practices that, in Magda Gerber's words, go together: "On one hand, adults prevent young children from doing what they are capable of doing and are motivated to do. On the other, adults tend to ask children to do what they are not ready to do" (CDE 1988).

Unlike adult management of risk, which is to ensure children's safety and manage stress, seen in most early childhood education programs in the US, in other cultural contexts—for example, in the kindergartens in Anji, China—children are given the freedom to manage the amount of risk they take while learning. Early childhood teachers in Anji observe the children at play and intervene in extraordinary situations, but most of the time the children manage risk on their own.

What one observes as children in the Anji kindergartens engage in play is their capacity to judge how much risk they can take to explore an idea, solve a problem, or experiment with a developing skill. As children build structures to climb and jump from, they constantly check how stable the structure is

and whether each part can bear their weight. They make sure that enough cushioning material is placed on their landing spots. Sometimes one child will keep a wooden board steady as another child walks out and jumps from the other end. The children sometimes debate about risk, or one will explain to another an adjustment that has to be made before the climbing structure or slide they have coconstructed can be safely used.

What can early educators learn from the Anji Play approach to risk? Two observations are particularly noteworthy. First, with the freedom to manage risk, young children take much greater risks than many early educators would consider acceptable or appropriate in the US. And second, young children are thoughtful about taking risks, whether physical, intellectual, or social, and reveal an amazing capacity to judge and self-assess their risk and know the amount of challenge they are intellectually and physically ready to explore or attempt.

Offering children opportunities to engage in self-determined risk-taking has many benefits. Children's carefully gauged risk-taking can lead to rich, complex learning opportunities. The learning that occurs when young children are free to determine their play and manage risk can inspire early educators to reflect on their image of the child—what they think children are capable of—and the cultural beliefs and goals that shape their educational programs. Scholar and author Susan Solomon writes: "Playgrounds need a basic level of safety … but playgrounds also need a certain level of acceptable risk. Overly safe playgrounds inhibit kids from becoming mature adults" (Almon 2013, 16).

◆ **Teacher Reflection:**

- What messages did you receive growing up about risk?
- How comfortable or uncomfortable are you taking risks?
- What messages are you communicating (through words and nonverbal behavior) to children in your class about taking risks?

But What About Parents, Families, and Staff Who Worry About Injury?

Teachers and administrators often describe parents' fears about injury as the number one reason children are not offered risky play opportunities in early learning programs. Parents and families, and often teaching staff, have different degrees of comfort and fears about risk. There is undoubtedly a range of opinions in the classroom about what adults believe is an acceptable level of risk for children to be exposed to. As early childhood teachers work in partnership with parents and families, it is critical for teachers to understand each family's beliefs and feelings about risk-taking.

What all parents and teachers are likely to agree on is that children need to learn how to manage stress and various challenges as they mature. Teachers can help parents see that managed risk-taking with young children is valuable because learning to take risks supports children in learning coping skills and discovering their strengths and capabilities when they experience life's stressors.

It is important to encourage productive dialogues with teaching colleagues as well as with families to listen to concerns individuals have, genuinely express empathy for these perspectives, and then strive to discover points of shared agreement, before initiating conversations about expanding anyone's comfort with risky play. This strategy is more effective than altering the classroom or playground environment—removing as much risk and challenge as possible to accommodate the most concerned and nervous staff, parents, or family members. The latter prevents teachers from creating optimal learning environments for young children in their care and could also have unintended consequences.

Many children are driven to experience risk as they learn. If they are not supported in doing so in their early learning programs, they may seek challenges that stretch their skills in other, less well-managed or developmentally appropriate environments.

Injuries and Risk

Joan Almon describes research on risky play, including play in adventure playgrounds, and notes that although adventurous play brings some bumps and bruises, the rate of serious injury is surprisingly low.

Many play injuries are related to poorly designed or broken play materials or playground equipment. Joe Frost, an internationally renowned play researcher, has provided testimony in over 200 lawsuits resulting from injuries that occurred on traditional playgrounds. He reports that at the root of the problems that lead to injury are, overwhelmingly, "poor design and improper maintenance" (Almon 2013, 23). Because it is difficult for children to evaluate the safety of their play materials and equipment, **one of the most important things that teachers can do is scan play environments on a regular basis to identify and remove hazards.** A hazard is something that children cannot be expected to see and therefore cannot avoid, for example, a stone or a root sticking out of the ground in the middle of an open field, or a bolt or screw protruding from a piece of playground equipment that could poke a child (Almon 2013, 25).

When injuries do occur in early childhood programs, teachers can help children to feel safe by using a tone of voice that is comforting and provides assurance but is also not worrying for children. Teachers should communicate empathy, help children to receive the care and medical attention they need, and assure them that they will be all right and that they will remain with them until they are feeling strong and safe again. In the vignette below, the teacher, Joseph, provides support to Manny after he falls and scrapes his knee. The teacher's tone and approach is one of empathy, but not concern, that communicates calm and confidence to the injured child.

Manny is at the fish tank, a place of comfort in the classroom, just inside the door to the outside classroom. After cleaning Manny's knee with antiseptic, Joseph hands Manny an adhesive bandage, with the paper wrap just slightly peeled back. "Remember to throw away the papers when you are done." Manny frees the bandage from its wrapper and applies it to his knee.

"Feel better?" Joseph asks.

"Yeah," says Manny.

"Good. You do a fine job of taking care of that scrape," Joseph declares, then adds: "Hey look! The fish are playing a game of chase just like you all do outside!"

Risk–Benefit Assessments of Children's Play

… confusion about safety and risk management is widespread … sensible risk management is not about creating a totally risk-free society. Providers should strike a balance between the risks and the benefits. This should be done on the basis of a risk assessment. … Historically, risk assessment in play has often focused on injury prevention. However, there is now widespread recognition of the need to assess the benefits—including enjoyment, health, and well-being— alongside the risks. Risk-benefit assessment focuses on making judgments about the risks and benefits associated with an activity, and the measures that should be in place to manage the risks while securing the benefits. (Ball, Gill, and Spiegal 2012)

Children learn to take risks as an inherent part of their learning and development. Acknowledging this fact can help adults shift away from designing play environments for children that limit their opportunities to experience acceptable risk-taking. Children's play can be considered using a risk-benefit perspective, which involves

- understanding that play activities lead to developmental benefits in addition to risks; and

- learning to use a risk-analysis lens when considering the opportunities children have to experience activities that offer a challenge and a moderate level of acceptable risk (Ball, Gill, and Spiegal 2012).

Teachers can apply risk analysis to any play activity.

There are signs that public debates about risk are shifting from a focus on "safety at all costs" toward conducting **risk-benefit assessments** to acknowledge the range of benefits that result from children's healthy and developmentally appropriate risk-taking in play. Risk-benefit assessment is a tool teachers and administrators can use to support their decision-making process as they strive to find a balance point where health, safety, and protection of children is emphasized along

with a value for environments that support children's exploration, discovery, and risk-taking.

Ball, Gill, and Spiegal's risk-benefit assessment for children's play begins with a relevant guiding question that a program wants to explore, for example: "How can we include water play and keep all of the children safe?" "Should tree climbing be allowed during recess?" "How can we support children's self-assessment of risk in their outdoor play?" (2012; see table 4). The assessment also includes several questions teachers and administrators can use to guide their discussion about the developmental benefits of positive risks and the probability of adverse outcomes or negative risks associated with allowing different types of play. Answers to these questions help individuals make intentional decisions about planning for healthy and developmentally acceptable levels of risk-taking in their early learning environments. The questions are designed to be a set of prompts, not a rigid list, and should be adapted for different programs and contexts. And decisions should be regularly revisited as new research and best practices emerge, different groups of children and families enroll, and new staff members are hired.

Table 4. Risk-Benefit Assessment for Children's Play

Guiding Question: Should tree climbing be allowed or prohibited during outdoor play?		
Issue	**Commentary** **Addressed or prohibited in laws, regulations, or school policies?**	**Information Sources**
BENEFITS: What are the benefits for children? For others?	Example: The pleasure it provides children. Benefits to health, confidence, and well-being.	These will vary depending on the topic under consideration. They could include: • Common sense; experience • Observation of play space and equipment in use by children • Standards • Guidance and resources from relevant agencies • Expert opinion • Views of colleagues and peers • Relevant experience from other providers • National data sources • Local data sources • Research studies • Local knowledge

Table 4. Risk-Benefit Assessment for Children's Play *(continued)*

Guiding Question: Should tree climbing be allowed or prohibited during outdoor play?		
Issue	**Commentary** **Addressed or prohibited in laws, regulations, or school policies?**	**Information Sources**
RISKS: What are the risks? (positive risks? negative risks?) What level of risk is involved? (challenging activity/low risk, moderate risk, or extreme risk)		
EXPERT VIEWS: What views are there on the nature of the risk, and how authoritative are they?		
RELEVANT LOCAL FACTORS: What relevant local factors need to be considered? (e.g., characteristics of the facility, families being served, community cultural context)		

Table 4. Risk-Benefit Assessment for Children's Play *(continued)*

Guiding Question: Should tree climbing be allowed or prohibited during outdoor play?		
Issue	**Commentary** **Addressed or prohibited in laws, regulations, or school policies?**	**Information Sources**
OPTIONS AND THEIR COSTS: What are the options for managing the risk, and what are the pros, cons, and costs of each? (e.g., increase the opportunities for engagement [with good risk], do nothing, monitor the situation, mitigate or manage the risk, remove the risk)		
PRECEDENTS/ COMPARISONS: What precedents and comparisons are there? (e.g., from other providers; from comparable programs, services, and activities)		

Table 4. Risk-Benefit Assessment for Children's Play *(continued)*

Issue	Commentary Addressed or prohibited in laws, regulations, or school policies?	Information Sources
Guiding Question: Should tree climbing be allowed or prohibited during outdoor play?		
RISK-BENEFIT DECISION: What is the risk-benefit judgment or decision? Do the benefits outweigh the risks, but need to be managed? Monitor carefully and review the decision at another time? Provide information to staff and families about the decision and rationale?		
IMPLEMENTATION OF RISK-BENEFIT DECISION: How should the decision be communicated and implemented given concerns, cultural attitudes, and beliefs? How is change managed and sequenced?		

(Source: Ball, Gill, and Spiegal 2012, 67–68)

"The Paradox of Risky Play:
Keeping kids safe means letting them take risks."

There is evidence to support concerns that absence of opportunities for outdoor risky play will result in children disengaging from physical activity. One Canadian study documenting preschool children's use of play equipment in 16 child care centres found that play equipment was used only 13% of the time and was used as intended only 3% of the time. US child care providers in one study expressed concerns that overly strict standards had rendered outdoor play areas unchallenging and uninteresting to children, thus hampering their physical activity. Furthermore, participants noted that some children used equipment in unsafe ways to maintain challenge. (Brussoni et al. 2012, 3140)

—Mariana Brussoni, Associate Professor in the Department of Pediatrics and the School of Population and Public Health at the University of British Columbia

Involvement in risky play provides children with opportunities to learn how to self-assess risks and manage challenging situations. Even very young children need to have opportunities to take risks because these lead to important learning experiences, including mastery of walking, running, climbing, and riding a bike. As children experience both success and failure, they learn how to persist in the pursuit of a goal and that persistence and hard work can lead to feelings of pride and accomplishment. They also are motivated to solve problems and try new ways of doing things (Tovey 2010). Many of the movements that are associated with risks in children's play—swinging, climbing, sliding, biking—and that develop their motor skills, balance, coordination, and body awareness take place in outdoor environments, the focus of the next section.

A Message from the California Department of Social Services, Community Care Licensing Division on the Importance of Risk-Taking in Children's Play

As it has been stated throughout this book, the role of children's risk-taking provides many benefits to young children including physical, cognitive, and social development; independence; and improved mental health. Children's risk-taking has also been associated with learning the skills needed to understand how to navigate and avoid injuries. There are many good reasons for encouraging children, rather than limiting their opportunities for risk-taking and risky play.

Supervision is the most significant and effective strategy for preventing injuries and creating a safe environment where children can have freedom to safely engage in developmentally appropriate risky play. Children of all ages, while being supervised, can explore their environment to take advantage of all learning opportunities and acquire new skills.

To maximize children's safety, playground safety measures need to be a daily part of the teacher's routine of scanning the environment for play activities and creativity. A thorough assessment of play areas by professionals can identify known hazards and other significant safety concerns to reduce the potential for serious injuries and ensure hazard-free playgrounds.

The California Department of Social Services, Community Care Licensing Division, Child Care Program provides oversight for California's licensed child care facilities. The purpose of licensing is to ensure that all licensed child care programs follow health and safety standards set by the California State Legislature to protect the well-being of children in child care. At the same time, it recognizes the need for children to have daily opportunities to take reasonable risks and challenges to help them develop into strong and capable children. It is significant to note that there are different rules, regulations, and monitoring processes in different states for child care centers and family child care homes. Additionally, not all early care settings are subject to state oversight. Nevertheless, the goal of the Department of Social Services and the Department of Education is to provide a secure environment to protect children from harmful practices and to protect the health and safety of children.

Lorita Noubarentz, MS, PPS, CPC – California Department of Social Services, Child Care Program Office Trainer

Outdoor Play

Playing outside is just plain fun, especially when children direct the play themselves. Watching children play outdoors, adults are often struck by their exuberance and zest. Outdoor play offers children healthy developmental experiences. Setting up the outdoor environment to offer children opportunities for play also provides teachers numerous opportunities to watch and assess how children use the play spaces, alone and together. Jane Perry, well known as a researcher and advocate for outdoor play, draws upon years as a teacher and researcher at the University of California Berkeley Harold E. Jones Child Study Center. She emphasizes the importance of viewing the outdoors as a classroom that, like the inside environment, can be set up intentionally. Preparing the outdoors with play spaces gives teachers the opportunity to watch and assess children's skills.

Gabriella: "We're digging for bugs, 'kay?" Gabriella uses a stick to turn over a layer of tanbark and dirt.

Tomás: "Yeah. And I found three bugs." Tomás shows Gabrielle his pail with three pill bugs inside.

Gabriella: "Three. That means we need enough dirt to cover the bottom. And some leaves for them to eat. No beetles, though." (Perry 2015, 339)

Natural spaces and materials stimulate children's limitless imaginations and serve as the medium of inventiveness and creativity. This is observable in almost any group of children playing in a natural setting. Authors Richard Louv and David Sobel both propose that children's early experiences in nature establish a love of nature and deep feelings of environmental stewardship (responsible use

and protection of the natural environment) and sustainability (Louv 2008; Sobel 2008). Such experiences also help children understand that humans are only one of many creatures and plants living among the resources of air, water, and food that keep us all alive.

Children need to be outside to experience this wonder and feel the compassion necessary to help sustain a healthy planet. Being outside in nature opens children's senses, enriching their play with sights, sounds, smells, taste, touch, and movement not found indoors. Children experience lively play when their active play is outside, where the air is fresh and they might feel a breeze or precipitation that enlivens their skin. Outdoor play supports children in engaging in the open-ended interpretation of materials.

Children who use adaptive equipment or mobility aids also need opportunities for outdoor play and exploration. It is important for teachers to work in partnership with specialists and families regarding safety guidelines when providing opportunities for play, including outdoor play.

Professional organizations for early childhood educators, developmental scientists, and pediatricians agree that time for outdoor play is essential for children's heathy development. Why? What do children learn when they play outside?

- **Physically active outdoor play** fosters children's kinesthetic sense (being aware of the position and movement of parts of the body) and supports strength and coordination.

- **Child-initiated outdoor play** helps children establish peer relationships, develop cognitive and linguistic abilities as they develop ongoing narratives and solve problems, and negotiate with fellow playmates emotionally, socially, and cognitively.

- **Outdoor nature play** fosters children's deep connections with nature and engagement with and knowledge about living organisms and environmental systems. Louv describes many benefits of outdoor nature play for young children's learning and development (2008):
  - Nature provides children with an opportunity to wonder, wander, explore, observe, raise questions, and investigate.
  - Nature inspires creativity in children and engages the full use of their senses.
  - In nature, a child finds freedom, fantasy, and privacy—a place distant from the adult world, a separate place.
  - Nature provokes humility.
  - Nature is reflected in a capacity for wonder.

Perry finds that when adults prepare the outdoor space—an outdoor classroom—for children to actively engage in under adult observation, they develop a relationship with nature, get the large muscle practice they need while learning about their bodies, and learn how to engage socially and compassionately (Berto 2014; Perry 2001; Perry 2008; Perry and Branum 2009). Children feel themselves taking the small risks that are a necessary foundation for self-confidence. Outdoor environments with equipment and materials allow them to explore the stability of their constructions and test the limits of their developing physical skills.

What Is an Outdoor Classroom?

Research by Perry and others shows that children benefit from spending more time outdoors, especially in natural environments. The goal of an outdoor classroom is to increase the quantity, quality, and benefits of outdoor experiences for children. Outdoor classrooms acknowledge that important

learning takes place outdoors that does not occur indoors. To support children's learning effectively, outdoor environments need to be as thoughtfully and intentionally planned and arranged as indoor environments are. Adults should not think of inside learning contexts as more educational than an outdoor classroom.

Children view time in the outdoor classroom as time when they can be in control of their imagination and expression, when they are the ones making things happen. While the indoor classroom tends to frame children's experiences with specific and fixed expectations, the outdoors allows children to experience more open-ended themes in their play and inquiry (Corsaro 2018; Perry 2001).

Outdoor classrooms can offer space and materials that can be used flexibly and with open-ended interpretations that invite children's exploration and experimentation. As children invent their own themes and roles outside, they use the open-ended natural materials that can become anything—wood chips can be money, an acorn cap can be a fairy cup, and sand and water can be mixed into whatever the child's imagination calls forth (Perry 2003, 2008).

Teachers' Roles in the Outdoor Classroom

In the outdoor classroom, as in the indoor classroom, teachers draw upon a broad range of intervention strategies from indirect coordination to more direct involvement. Indirect coordination includes preparing play spaces, observing developmental progress, and refining play spaces based on how children use the area. Direct involvement strategies include organizing and promoting play while always taking into account the children's play themes and point of view (Perry 2001).

The Outdoor Classroom Differs from the Indoor Classroom: Teachers Consider Environments, Opportunities, and Challenges

Thoughtfully designed outdoor and indoor classrooms present different but complementary opportunities and challenges that support children's development and learning. Perry compares outdoor and indoor classrooms from the teacher's perspective and describes the typical contrasts in space, organization of areas, types of play, and play demands on children (Perry 2001, 2015; Perry and Branum 2009):

- **Space:** Outdoor classrooms have more loosely designed areas for movement and focus, in contrast to more focused activity areas found in indoor classrooms.

- **Organization of areas:** In outdoor classrooms, space is arranged to maximize active play and play with materials and accessories. In indoor classrooms, space is arranged to maximize play with materials and accessories.

- **Types of play:** Typically, play in outdoor classrooms is noisy, physically vigorous, child initiated, open ended, active, exploratory, experimental, and teacher facilitated. In indoor classrooms, play is generally quieter, task oriented, exploratory, experimental, teacher generated, and child initiated.

- **Play demands on children:** In the outdoor classroom, children invent themes and roles in open-ended, flexible activity areas as well as participate in more teacher-guided thematic areas. In the indoor classroom, children are guided by explicit area cues, for example, the block area cues for constructive and dramatic play and the art area cues for creative but seated artistic expression (materials and furniture). Outdoors, children are challenged to find playmates, agree on a theme to their play, negotiate what roles each player has in the pretend game, and then convey understandings as the pretend play proceeds.

Physically Active Outdoor Play

In physically active outdoor play, children use their large muscles and whole bodies to run, jump, climb, hop, skip, gallop, swing, ride tricycles and wagons, throw and catch, and push and pull the heavy props they need for their pretend play. Physically active outdoor play enhances growth by including the child's whole body in developing these skills. Developmental milestones in motor development (including bone and muscle development and the ability to move around and manipulate the environment) and motor competence include the continuum of abilities found in outdoor play—changing direction quickly while running, throwing, and catching a ball, and, as they get older, active play sequences that combine running, jumping, throwing, and catching.

According to the United States Department of Health and Human Services Centers for Disease Control (CDC) 2018 guidelines, children and adolescents require 60 minutes or more per day of strenuous or moderate physical activity that includes

- aerobic activities (e.g., running, jumping);

- muscle-strengthening activities (e.g., climbing on play structures, riding tricycles); and

- bone-strengthening activities (e.g., hopscotch, hopping, skipping, jumping, jumping rope, basketball, tennis, gymnastics).

The CDC guidelines also recommend that preschool-aged children (age three to five years) be physically active throughout the day to enhance growth and development and that adult caregivers encourage active play that includes a variety of activity types.

Aerobic activities such as running, galloping, and brisk walking involve increased heart and breathing rates that promote endurance. Muscles are strengthened when children play on climbing structures, ride tricycles, and climb trees. The following vignette provides a window into the many benefits of physically active outdoor play for young children's development.

Jorge, eighteen months old, and Aiden, twenty months old, excitedly head toward the small grassy knoll in one corner of the play yard and begin to clamber up. Their teacher, Sierra, observes that both move with arms outstretched for balance on the uneven ground. Reaching the summit, Jorge waits a moment until Aiden joins him. Then, squealing excitedly, they lie on their bellies, crawl over to where the slope is greater, and begin to roll down. Aiden rolls at an angle and, about halfway down, awkwardly bumps into Jorge. Standing nearby, Sierra sees that this physical contact provokes exclamations and laughter. They both resume the challenge of rolling down the hill so they can climb it once again.

Jorge and Aiden not only strengthen their friendship and social skills by playing together, but by repeatedly climbing up the grassy knoll and rolling down they also engage in big body play that supports development of gross motor skills including coordination, running, and balance.

Loose Parts and Nature Play

Simon Nicholson developed the "loose parts" theory, explored in chapter 3 (1971). Nicholson believed that in any environment, both the degree of inventiveness and creativity and the possibility of discovery are directly proportional to the number and kind of variables in it. If a loose-parts toy is open ended and children can use it in many ways and combine it with other loose parts through imagination and creativity, what are loose parts in nature? Loose parts in nature that support children's inventiveness, creativity, and discovery include water, trees, bushes, flowers, long grasses, bugs, sand mixed with water, places to sit on and under, and structures that offer privacy and views. As Louv writes, **nature is the richest source of loose parts** (2008).
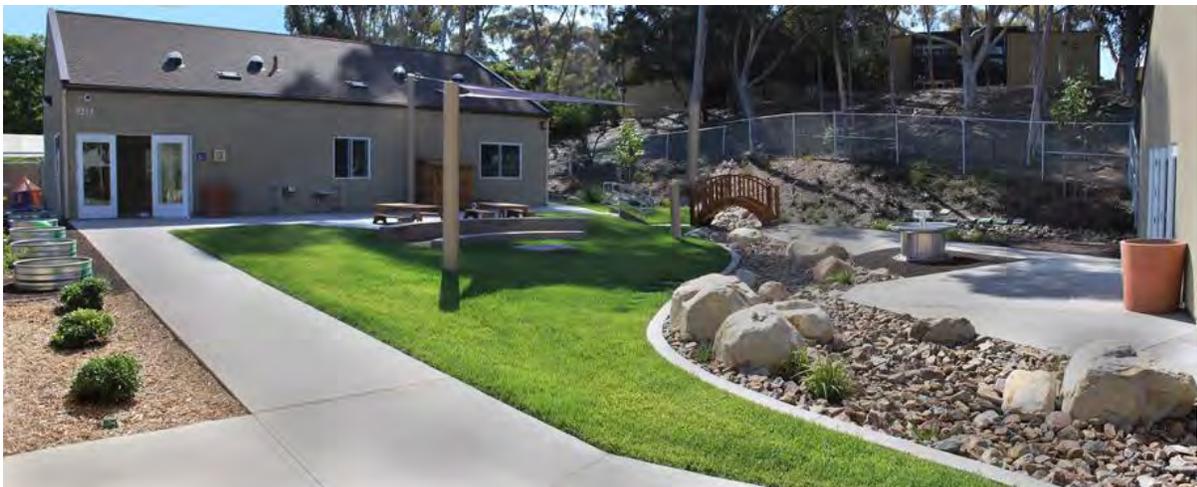
Outdoor play is an optimal context for observing the integrated nature of young children's learning. Perry offers the following research vignette that shows children engaged in outdoor play that is physically active, child initiated, and inspired by the children's knowledge of their own environment. This passage also illustrates the important role of the teacher in supporting children's autonomy yet intervening thoughtfully to maintain safety (Perry 2015, 333–334):

On this first day of school, returning four-year-olds, Gabrielle and Tomás, rekindle their friendship during the time planned for outdoor play. Their teacher, Rebecca, notes that they have returned to the large slide that has been a favorite place for their physically active, extended pretend play. Today, they take turns as they go down the wide slide slowly making hissing sounds. Rebecca sees that as they get about halfway down, each pauses to drape a leg across the lip of the slide. Rebecca's unsure about what they are doing. She watches to see how Tomás and Gabrielle are coordinating their actions with one another and with the other children sliding past them. Because she is not yet familiar with all the children's abilities, Rebecca intentionally positions herself at some distance but close enough to respond in case they look like they are going to fall from the slide. Now, Gabrielle's and Tomás' movements and hissing sounds have attracted several of the new, younger children who have climbed up and emerged at the top of the slide. The younger children are now attempting to imitate these two more experienced players.

Rebecca decides it is time to intervene more actively. She calls out: "Gabrielle and Tomás. Can you keep your legs inside the slide please? I know you feel safe, but I'm not so sure the children who have not had as much practice will be safe. They will see you dangling your leg and think it is OK, and they might flip off the slide and get hurt."

"But we are newts, and this is what they do," Tomás explains.

"Newts! Of course." Rebecca pauses to consider. "Say, newts? I want to help kids play and stay safe. Would you mind enjoying your moist log with your legs inside the slide?"

Tomás frowns but returns his leg to the inside of the slide.

At that moment, Leah, a four-year-old child, slides down on her belly past Tomás as Rebecca attentively watches from nearby.

"Here comes Leah," Rebecca says as a way of indicating Leah's entrance into the play. "Leah, Gabrielle and Tomás are newts."

"We eat bugs and sleep," explains Gabrielle, zooming down the slide. Tomás smiles and sits down next to her and they descend the slide together.

Rebecca moves to closely shadow Leah as she attempts to climb up a challenging arched ladder. "You might want to ask Leah if she wants to be a newt too," Rebecca suggests.

The next morning before school, Rebecca considers the beauty of Tomás' and Gabrielle's physical recreation of a newt. She thinks about how she can support their creative play while maximizing opportunities for all the children with their range of abilities to fully enjoy big body play, and the physical and social challenges that the slide provides. Rebecca decides to prepare the environment to provide a special place for the newts. She takes the two benches from under an overhanging roof and places them next to the nearby leafy vine.

When Gabrielle and Tomás come running outside, Rebecca hears:

"We're newts, right?"

"Right."

Rebecca approaches them. Pointing to the benches, she casually mentions, "There is a log for newts." Gabrielle and Tomás look, then continue their game on the benches. They begin gently caressing the delicate vine leaves. Then, lying face down and slinging one leg off, they start hissing "ssssssss."

Gabrielle and Tomás' newt play offers them the chance to move and refresh muscles that are not used as often indoors. Their aerobic climbing and scampering develops their endurance and strengthens their bones and muscles. The physicality of Gabrielle and Tomás' newt game also requires that they talk with and negotiate proper safety expectations with Rebecca. They safely adjust their balance and use upper-body endurance to share space with peers on the climbing structure.

Gabrielle and Tomás confront challenges both with each other and with nature. Such challenges contribute to children's social–emotional development. There are cognitive challenges as well. As children play together outside, they observe, compare, explore, and investigate their physical and social world. They ask questions and explore solutions. During Gabrielle and Tomás' exploration and experimentation as they pretend to be newts on a tree branch, inching down the slide with their legs draped over

the side, they learn about how to balance their bodies in space. Through their play, these two peers also develop scientific vocabulary and explore complex concepts such as risk, fear, and protection, as seen in the brief exchange below (Perry 2015, 340–341):

> Tomás: Now let's say we were done, because a snake is coming to get us!
>
> Gabrielle: But we don't get eaten, right?
>
> Tomás: We think we are going to be eaten.
>
> Gabrielle: But not for real, right?
>
> Tomás: Right, because we jump to a different branch, and the snake can only slither.

This is an important moment for Tomás and Gabrielle. As they imagine surviving in the wild, they acknowledge their fears and support the other's sense of security. They practice using language to express their ideas and integrate newly learned concepts, like predator and prey. Tomás and Gabrielle's teacher, Rebecca, observes that they have figured out how to communicate with each other within, then outside of, the play frame, for example when Gabrielle steps outside the pretend play frame and asks, "But not for real, right?"

Gabrielle and Tomás' newt game evolved over months and evoked great interest and participation from younger and older children. Spontaneously, children bring newt-related activities from the outdoor classroom into the indoor classroom. Several draw pictures of different kinds of newts and salamanders. Others, including Gabrielle and Tomás, ask to dictate stories about newts, which they later act out during circle time.

The children's fascination leads Rebecca to meet with the school librarian who recommends children's books about newts, salamanders, and forested areas. The librarian also recommends books for Rebecca and other adults, including family members. Parents and other family members ask about the children's fascination with newts, so Rebecca shares stories with families in a weekly newsletter. The children's ongoing interest and the resources she has collected inspire Rebecca to plan related science and literacy curricula. With participation from several parents, the class paints a mural of a forest

with rocks, logs, and a stream, adding newts and other animals they've learned about that share this habitat.

The following example highlights the opportunities for children to encounter social, emotional, cognitive, physical, and linguistic challenges in outdoor play—experiences that support learning and development across domains.

> Zaheed and Highness, both three years old, are under the shade of a maple tree, each stirring tanbark pieces with their wooden spoons in small metal pans. Zaheed places his pan on a burner of the plastic stove. "Cooking!" Four-year-old Anna calls out as she and Joaquin veer over after leaving the disk swing. She speaks in Spanish to Joaquin, who gathers fallen maple leaves and begins breaking them up into a bowl. "Do you want some of our salad?" she asks Highness and Zaheed. Zaheed nods affirmatively and Anna directs Joaquin to serve. Joaquin sets the salad down. Highness grabs the salad pan and runs away while smiling at Joaquin. Joaquin smiles back and gently bumps Highness. Highness grabs Joaquin in a wrestle hold, laughing. Anna snatches up an order pad and attached pen. "So, Highness! Highness! What do you want to eat?" Joseph, who has been watching nearby, moves closer. "Zaheed! Are you the cook? Are you cooking?" Joseph gently shakes the pan, making a shhhhhhh cooking sound. "Cooking?" asks Joseph again. Zaheed nods and smiles. Anna is saying as she makes marks on the order pad, "So we have tacos, pizza, salad." "What's in your garden that's ready to eat?" asks Joseph. "Beans!" Highness yells. Joseph steps away. "You want beans, Highness?" "Yeah," Highness confirms as Joaquin and Zaheed resume stirring tanbark.

This short play interaction creates an opportunity for children to construct a play script together, take on roles, and practice listening, turn taking, and being responsive to a peer's communication. They are also developing their cognitive skills as they symbolize by using loose parts—tanbark and leaves—in their outdoor classroom, pretending they are the ingredients for a delicious salad. This play also provides them with opportunities to practice their emergent writing skills as they make squiggles on a pad of paper documenting the orders coming in for Zaheed to cook.

Teachers Can Observe Children Engaging in Outdoor Play and Ask Themselves Questions About What They Are Seeing

- Has each child found a play space where they can follow their own curiosity? What is capturing the children's attention? What do I hear them saying? What are they looking at and showing interest in?

- Is anyone looking for a friend to play with?

- Are any of the children losing focus in their play, interrupting other children's play, or becoming unsafe?

If a teacher observes a child looking for someone to play with during outdoor play, they can offer a range of supports. The teacher could ask, "Have you asked (use individual children's names) if they want to play?" Or they could suggest an accessory to use to become part of their peers' play scenarios (e.g., offer a pretend camera or phone and suggest that the child be a photographer who can take photos of children as they play to document their games).

If a teacher observes one or more children who are losing focus in their play or engaging in play that is becoming unsafe, they can try engaging them in conversation: "What's your game?" "Who are you pretending to be?" "What do they do?" Asking children questions about their play can be very effective in steering them back into the pretend, social nature of the play. Children are naturally motivated to play together. They will be motivated to use language and cognitive skills to find a friend and keep their game going.

Source: Perry 2001

Across California, growing numbers of schools are developing nature-based educational components in outdoor classrooms so children can experience a sense of wonder and connection with the natural world. Numerous resources and organizations provide direct assistance (examples are provided in the resources section at the end of the book).

How Can Teachers and Families Work Together to Start a School Gardening Program and a Nature Play Space?

Graham arrived at his elementary school knowing he wanted to incorporate gardening and nature play into his lessons on math, science, and language. He also knew that experience with gardens and nature can improve mental health outcomes in children experiencing emotional and social difficulties (Chiumento et al. 2018). Graham included his plan in "Welcome to School," his introductory newsletter to parents, and mentioned it casually to families as well. He spoke of it again at open house for family members early in the year. He asked the children what kind of plants and natural materials they would like in a garden and nature play space. His goal was to guide the children to study the life cycle of the plants and creatures that share a garden environment over the course of the school year. He also wanted his students to have opportunities to explore and play in natural space with open materials they could use for building (e.g., bamboo poles) and dramatic play (e.g., burlap bags).

Graham arranged with a local hardware store to receive a discount on wood and plastic to build 3-inch-by-5-inch planter boxes. He also received a donation of soil and seeds from a local nursery. With these materials in mind, he approached the school parent–teacher association with his plan. Graham proposed a schoolwide garden and nature curriculum that would start with his classroom. A few parents helped assemble the planters and different elements of the nature play space and families planted seedlings that the children germinated in their classroom.

Children from Graham's classroom sign up to be nature guides who visit other classrooms in the school to share the news with them about the garden and nature play space. They invite children from across the school to water the garden and explore the natural materials during recess. Children make signs—"Our Garden Rules," "Playing in Nature is Cool"—which Graham laminates and posts on sticks in the garden and nature play space.

In just a few months, children are not only sampling lettuces, mints, and chard, but they are also anticipating spring cycle and harvest. Bugs are captured to observe, draw, and release, and those sketches are labeled and posted on an outdoor bulletin board near the planters.

Barriers To Teachers' Use of Outdoor Classrooms and Support for Children's Outdoor Play

There are many barriers that prevent children from having opportunities to engage in outdoor play in early learning programs. If children in a program are not playing outdoors, a first step for teachers in removing barriers to outdoor play is reflection on the various factors that prevent access to this type of play, which is so beneficial for health, development, and well-being. Some of the most common challenges that prevent children in early learning programs from having opportunities to play outdoors include

- teachers' range of comfort with large motor play (e.g., running, jumping, swinging, rough-and-tumble);

- teachers' concerns about "play fighting" and "play fighting turning into fighting" (discussed in chapter 6);

- teachers' lack of positive experiences with children's outdoor play;

- teachers' concerns about feeling less control when children are playing outside;

- liability and licensing restrictions;

- concerns about injury; and

- teachers' concerns about neighborhood safety.

Sometimes children are given chances to play outside; however, fears related to injury might lead programs or schools to create classrooms or play spaces that are sterile. A program might have a play structure but no natural elements or loose parts (e.g., rocks, sand, trees) to stimulate children's creativity, risk-taking, and problem solving. Another program might limit outdoor play due the lack of safety in neighborhoods (community violence) or even weather (lack of shading in an outdoor area drenched in sun, smog, or smoke that makes it difficult or dangerous to be outside). Still other programs have old and broken (dangerous) play equipment. Finally, some programs have limited outdoor space available or space that is mostly pavement. Understanding any barriers preventing or limiting outdoor play in a program is the first step in addressing and eliminating them.

◆ **Teacher Reflection:**

- How often do children in your program have opportunities to play outdoors?

- Do you have an intentionally planned outdoor classroom?

- Do children have access to loose parts and nature elements in their outdoor play environments?

- Are children able to safely engage in big body play? In quiet solitary play?

- What is one way you can extend or enhance children's outdoor play experiences?

- Are there barriers to any child's participation in and access to all play areas and materials?

Children need to have opportunities to engage in risky play, including outdoor play. When teachers support children in learning how to engage in self-assessment of risk, they not only communicate a belief in children's agency and capability but also help them develop important dispositions such as persistence, curiosity, creativity, and internal motivation for their own learning.

Key Take-Aways for the Early Childhood Classroom

- Learning to take risks is a necessary developmental task. Children must take risks to challenge themselves to grow, test their limits, learn how to overcome obstacles, cope with frustrations, and taste the joy and self-esteem-building experiences of success.

- Enabling children to engage in self-determined risk-taking has many benefits.

- Restrictive laws, extensive regulations, and fear of lawsuits have all contributed to the risk-averse culture in the United States. Providing children opportunities to participate in risky play and enjoy all the benefits associated with learning to take risks will require addressing the policies and regulations that fuel the current conditions.

- Research shows that the rate of serious injury in risky play is very low. Most injuries that occur during play are related to poorly designed or broken play materials or playground equipment. One of the most important things that teachers can do to lower the risk of injury during play is scan play environments on a regular basis to identify hazards, then remove them.

- Outdoor play is essential for children's heathy development. Teachers can view the outdoors as a classroom that, like the indoor environment, can be set up intentionally. Thoughtfully designed outdoor and indoor classrooms present different but complementary opportunities and challenges that support children's development and learning.

This chapter:

- Defines inclusive play as an explicit human right for all children
- Provides an overview of key legislation created to protect the rights of people with disabilities
- Highlights the importance of play experiences and social inclusion for children with disabilities
- Describes strategies to promote access to play, encourage children's participation to the best of their ability in play, and make curriculum modifications in classroom environments
- Outlines the concept of Universal Design for Learning (UDL) and its application to designing quality inclusive play environments
- Introduces several vignettes to show examples of inclusive play environments designed for children with disabilities

Inclusive play is beneficial for all children. It allows the opportunity for children with [disabilities] to experience the positive impact that play has on their development and overall well-being. It allows typically developing children to view the world through a different, more diverse lens. Kids with a diverse range of abilities playing together in the same space will develop a sense of equality and togetherness they will never experience if they remain separated in play. It allows them all to interact with one another, exposing their differences, but highlighting their similarities at the same time, helping them to develop an awareness, respect, and understanding of people with all abilities. (Allen 2018)

The concepts regarding play that have been described in the previous chapters apply to all children, including children who have or are at risk for disabilities. Sometimes there are additional aspects to consider, as well as specific facilitation strategies that are useful in promoting optimal learning and development through play experiences. This chapter shares some of those aspects.

Defining Inclusive Play

Children with disabilities are no different than other children in having an innate desire to play, form friendships, and be accepted as members of their peer group. Inclusive play in early childhood education is consistent with current understandings of inclusion. Although inclusion, from a human rights perspective, means different things to different people, the United Nations Educational, Scientific and Cultural Organization (UNESCO) offers a definition pertinent to children who have historically been marginalized, including those identified with disabilities (2005, 13):

> Inclusion is seen as a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures, and communities, and reducing exclusion within and from education. It involves changes and modifications in content, approaches, structures, and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children.

Inclusion Works! from CDE offers this definition (2021, 8):

> The full and active participation of children with disabilities or [delays] in community activities, services, and programs designed for typically developing children, including child care. If support, accommodations, or modifications are needed to ensure the child's full, active participation, they are provided appropriately. The participation results in an authentic sense of belonging for the child and family.

Inclusive Play and Human Rights

Inclusive play is an explicit human right for all children, including children with disabilities, as follows:

United Nations Convention on the Rights of the Child, Article 31 – ratified in 1989
States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child, and to participate freely in cultural life and the arts.

United Nations Convention on the Rights of Persons with Disabilities, Article 30 – Participation in cultural life, recreation, leisure, and sport – adopted in 2006

States Parties shall take appropriate measures to enable persons with disabilities to have the opportunity to develop and utilize their creative, artistic, and intellectual potential, not only for their own benefit, but also for the enrichment of society.

Historically, upholding the child's right to play has been more easily enacted with children who are typically developing, who, by simply being afforded the opportunity, need little support or motivation to fully participate in play experiences. However, there has also been increased attention on the rights of children with disabilities. In light of physical, sensory, neurological, social–emotional, or other differences, children with disabilities face many obstacles to exercising their right to creative expression, recreation, and social inclusion in play. Many young children with disabilities have limited opportunities to engage with typically developing peers and thus have little or no access to inclusive play (play opportunities that are available to all children, regardless of their ability or background). But even when children with disabilities are educated alongside peers in inclusive settings, providing the same opportunities for play does not guarantee access to equitable play experiences. The fact is that conditions suitable for most children to spontaneously play—time, space, props, and peers for play—are not enough to ensure the full participation of all children, particularly those who are at risk for or have identified disabilities.

Given what is known today about the complex nature and wide spectrum of variability in how children develop, think, and learn, there is a need to prepare educators and other care providers with the knowledge, understanding, and competence required to foster inclusive play among children representing a wide range of abilities, backgrounds, and needs. A human rights perspective recognizes the intersection of the rights of the child and persons with disabilities, affirming there is room for diversity, and everyone belongs. This position also supports the mutual benefits of inclusion on all levels, for children with or without disabilities, in schools, communities, and society at large.

Since 1975, legislation has protected the rights of people with disabilities in the United States, beginning with access to free and appropriate public education in 1975 and access to public services and accommodations in 1990. Following are several highlights from the legislation that applies to children's right to play.

The Americans with Disabilities Act (ADA) is a civil rights law that was passed in 1990. One part of the law prohibits child care providers from discriminating against persons with disabilities on the basis of disability. In the context of preschools and child care centers, this act provides children and parents with disabilities with equal opportunities to participate in programs and services. The ADA addresses access, but more is needed to effectively ensure participation and support.

The Individuals with Disabilities Education Act (IDEA) ensures that children with disabilities have the right to free and appropriate public education, including an individualized plan which can include specific goals and strategies to support participation and define the type of support needed in order for a child to engage in truly inclusive play. For example, there may be a goal on a child's Individualized Education Program (IEP) to increase conversational interaction with same-aged peers. The strategies to achieve this goal might include partnering the child with a small group of children for various routines and activities. Once that grouping is made, the teacher will help the children know one another by name and encourage them to use each other's names and participate in turn-taking games with the group.

Inclusion in Play Culture

The fundamental role of inclusive play in childhood has received substantial attention over the past half century. From an early age, play with both objects and people allow children to make sense of sensory (sight, sound, touch), physical, and social encounters in everyday life. As children grow, they are increasingly drawn to play together with peers, especially in groups. It is within these groups that children form a unique **play culture** (Wolfberg 2009).

Play culture refers to the unique social and imaginary worlds children cocreate out of everyday life experiences. The tools, narratives, themes, and traditions adopted by the play culture are often a reflection of and influenced by the larger society and culture. A critical aspect of play culture is that it offers natural play-based learning opportunities with limited participation of adults. **What children learn by playing with peers is qualitatively different from what children learn by playing with adults.** It is within the realm of play culture that children of diverse ages and abilities gain essential skills, including social and communicative competence, language, cognition, creativity, and emotional well-being.

The Importance of Play Experiences and Social Inclusion for Children with Disabilities

Research shows that being deprived of essential play experiences may have cascading effects on children's developmental growth, social functioning, and psychological health over the life span (Brown and Vaughan 2009). Children with disabilities—particularly those who present distinct delays or disparities in social, communication, and symbolic play development—often have more difficulty accessing and engaging in play experiences.

Children with disabilities may be kept apart from their peer group, often by well-meaning adults who are uninformed or lack the knowledge and skill to support inclusive play. Older children may also be socially excluded by their peer group. When integrated with peers who are developing typically, children with disabilities often require explicit guidance and support to become engaged and interact with their peer group. Peers can also be guided and taught strategies to successfully include the child with disabilities in play. Knowledgeable adults can assist if other children misinterpret the subtle or unconventional ways in which a child may be initiating and expressing themselves in play. For example, "Janie sometimes talks loudly when she is excited; she is so happy to be playing with us." Older peers may taunt or tease children whom they perceive as not fitting in. Providing simple explanations can give the child or supportive peers the opportunity to change those perceptions. Then children with and without disabilities can engage in interactive play experiences that are mutually beneficial in fostering developmental growth and meaningful peer relationships.

These all too common experiences speak to the significant role of inclusive play for children's learning, development, and social and cultural participation. The challenge for educators, caregivers, and families is in how to best support children in designing play spaces and facilitating play experiences that provide children essential inclusive play experiences.

**Designing Inclusive Environments:
Ajay, 4-Year-Old with Sensory Challenges**

Ajay, a preschooler, has many sensory difficulties (trouble receiving and responding to information that comes in through the senses) that make it difficult for him to access and participate in inclusive play experiences. Focused observations and collaboration with his family helped the teachers to understand what his challenges are so that they could incorporate what he needs in his play environments. Observations led the staff to see that clutter in the play area is extremely difficult for him to handle. When the play area had an excess of toys and books that were in disarray, he would become dysregulated—cry, scream, and run out of the play area.

The teaching team devised a plan that would help Ajay access the environment and willingly participate in play with his peers. A first step was to ensure the play area was well organized and easy to understand. They clearly defined the space with shelving, books placed on a shelf, toys organized in clearly labelled plastic bins on a shelf, and a neutral, single-shade carpet that defined the space for gathering as a group. In addition, they created and began using a visual schedule with pictures indicating when it is time to begin, play freely, clean up, and say goodbye. Finally, his favorite puppets and stuffed animals were added to the selection of toys. While these design elements were implemented based on Ajay's unique interests and his need for minimized distractions, they are also beneficial to many other children. In this way, the play experience is meaningful and enjoyable for all of the children, including Ajay.

Given the number of children diagnosed with or at risk for disabilities, it is imperative to create inclusive play environments that are consistent with high-quality early childhood inclusive practices. According to a joint position statement by the National Association for the Education of Young Children and the Division for Early Childhood of the Council for Exceptional Children, whether the play takes place in the school, home, or community, inclusive play environments should incorporate the following practices (DEC/NAEYC 2009):

- **Access**—All children have access to a wide range of learning opportunities, activities, settings, and environments.

- **Participation**—All children have the means to fully participate in environments and experiences through active engagement with materials and peers. Adults promote belonging, participation, and engagement of children with and without disabilities in a variety of intentional ways.

- **Supports**—Educators and caregivers have the tools they need to design supportive play environments and play experiences by applying effective and meaningful practices that address the unique strengths and needs of each child so that they can realize their full potential.

In order to promote access to play opportunities, teachers must begin with the understanding that all children are capable of learning through play. Teachers set the tone by acknowledging the importance of play experiences for every child's learning and development, as well as facilitating play experiences that maximize each child's ability to develop their individual potential.

Teachers also promote access to play by demonstrating respect and dignity for all children through their words and actions. The use of people-first language is an approach that recognizes the person before the disability, and uses accurate, strength-based language to describe qualities, characteristics, and actions in a respectful way. For example, the descriptions "Emilio uses a wheelchair" and "Morgan has a hearing impairment" identify the person before their disability, condition, or characteristics (Snow 2016).

By focusing on children's strengths, interests, and abilities, caregivers and teachers support their exploration and discoveries instead of limiting their access to play experiences. Beginning in infancy, caregivers demonstrate respect for children through individualized care routines, such as feeding, diapering, and sleeping. Through the preschool and early elementary years, teachers demonstrate respect by offering children opportunities to make choices, express themselves, practice problem-solving skills, and do things for themselves. Furthermore, teachers show respect by encouraging children to share their questions and ideas and responding with compassion when children make mistakes.

Access to play opportunities is also ensured through incorporating Universal Design for Learning principles and practices into classroom design, daily routines, and learning experiences.

Universal Design for Learning Supports Access

The concept of **Universal Design for Learning (UDL)** is directly applicable to designing quality inclusive play environments. UDL—also called inclusive design or human centered design—is defined by the North Carolina State University's Center for Universal Design as "[t]he design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" (Institute for Human Centered Design 2020). While this concept of design originated in architecture, the Center for Applied Special Technology pioneered the research and development of UDL for use in educational environments.

While much of the research around UDL is focused on classroom instruction and learning, play is an integral part of that learning experience, especially in early childhood and elementary school settings. The UDL framework is organized around the following three guiding principles that address representation, engagement, and expression (CAST 2018):

- Multiple means of representation—give learners various ways of acquiring information and knowledge
- Multiple means of engagement—tap into learners' interests, offer appropriate challenges, and increase motivation
- Multiple means of expression—provide learners alternatives for demonstrating what they know

These principles can be used to thoughtfully plan play-based learning environments and experiences that are inclusive of all children.

Provide multiple means of representation—present information and content in different ways. The first principle of UDL is to provide multiple means of representation. This takes into consideration the different ways in which children perceive the physical environment and the people within it. Thinking about children's different sensory modalities (e.g., sight, sound, touch, taste, smell, movement in space) may offer a starting point for designing inclusive play environments and spaces. It is important to consider which modalities might need to be highlighted, modified, or eliminated. For example, many children, including those with hearing impairments, language delays, or neurological differences (e.g., children on the autism spectrum), may benefit from visual supports such as signing, gestures, picture–word symbols for communication, visual schedules, or choice-making charts.

Many children, including children with visual impairments, may benefit from tactile support (e.g., physical touch as a prompt, textures and braille labels for materials and play centers within the class). These children and others may further benefit from auditory supports (e.g., musical notes to indicate the start of an activity, a drumbeat to indicate a transition, a song to say goodbye). The smell of popcorn popping might be another indicator that it is time to clean up to transition to snack time or movie time. To address the challenge of sensory sensitivities, it may be necessary to control the volume of music, provide alternative lighting, or eliminate scented materials.

Sensory Supports	
Visual (sight)	• sign language • gestures • picture–word symbols for communication • visual schedules • choice-making charts • photos to label toy bins and shelves
Tactile (touch)	• physical touch as a prompt • materials that vary in tactile quality (hard, soft, smooth, rough) • textures and braille to label materials and play centers within the class
Auditory (hearing)	• musical notes or bell ringing to indicate the start or end of an activity • drumbeat to indicate a transition • song to say goodbye
Olfactory (smell)	• fragrance of popcorn popping to indicate that it is time to clean up for snack time • lavender or other essential oils for relaxation time

Waheeda: Four-Year-Old with a Visual Impairment Who Recently Arrived in the US

Waheeda is a four-year-old who moved to the United States just a year ago and has been identified with a visual impairment. She can see shapes and light and can recognize familiar faces. She speaks limited English, some Farsi, and is learning braille. Waheeda loves playing with her classmates in the after-school program. Given her needs, the staff members were creative and careful when designing the play space. And because order is important to her, they ensure that things are always put back in the same place so she knows where to find them. The staff also incorporated many toys with unique textures that she can identify using her hands. All the storage tubs were labeled using braille and texture-coded icons. This helps Waheeda identify what is in each tub. For example, a large piece of furry material is attached to the tub that contains her favorite books. These books have sensory materials that she can touch and feel. She loves sharing these books with her favorite puppets in class—her favorite play routine is to pretend to be a teacher and read books to all her puppets and her classmates.

These next two elements of UDL support access and can also support participation.

Provide multiple means of engagement—encourage motivation and interest in children's learning. The second principle of UDL is to provide multiple means of engagement. This principle centers on eliciting and sustaining children's attention by using materials, activities, and themes that are of high interest and contextually relevant for a wide range of children. This includes providing access to a variety of options for play that are representative of children's diverse interests, cultural values, and experiences based in everyday life, as well as those that foster pure imagination. A basic premise of providing means of engagement is a safe and barrier-free physical environment that allows children to move freely, obtain materials, and initiate and join activities that support independence and autonomy. An important aspect of this principle is the need to continually revisit goals and modify the environment accordingly by providing varied challenges and resources as well as ensuring that the

goals of the activity are relevant to the child. Tools should be chosen with consideration of individual needs and what works for each child. This could mean providing specific toys and equipment that are of unique interest to a particular child. Hence while there may be generic tools such as a stuffed animal that is a favorite of the class or a talking puppet that is attractive to many children, there are also specific tools such as a set of building blocks preferred by a particular child which could become a centerpiece for interactive play. Certain children may also need tools for self-regulation that have a calming or stimulating effect (e.g., movement through yoga, dance, swinging, bouncing on a trampoline) which could also be enjoyed by many children.

George: Two-and-a-Half-Year-Old on the Autism Spectrum

George, a two-and-a-half-year-old boy identified with autism, was not demonstrating many skills in pretend play in his early learning and care setting. After his family shared that he loved lawnmowers, the teachers introduced miniature lawnmowers and little patches of fake grass that George could mow in the play area. His teachers found it incredible to watch how he interacted with the toy lawnmower and built elaborate play schemes around it. Other children were also interested in mowing lawns and it became a group activity. He had exponential growth in language that year. In George's case, having been provided toys that were of interest to him in his play he demonstrated pretend play skills not previously seen.

Providing multiple means of action and expression—differentiate the ways that children can express what they know. The third principle of UDL is to provide multiple means of action and expression. This involves giving children opportunities to demonstrate what they know and are capable of doing through what they do, say, and create. While this is very important in an academic context in allowing students to express their understanding and communicate in more than one fashion, it is also relevant

to play-based learning. It provides an accurate picture of a child's present knowledge and skills and is useful in developing a profile of developmental capacities that are still emerging, including those that are performed independently and those that require assistance from a person or adaptive equipment. Thus, a wide range of play materials and activities that vary in degree of structure and complexity are most conducive to supporting children with diverse interests, learning styles, and developmental capacities. For example, countless opportunities for action and expression are available through exploring, creating, and communicating with and relating to others in inclusive settings in the contexts of indoor play (using thematic toys, props, games, art supplies, and general items such as boxes and blankets) and outdoor play (using playground structures, playhouses, sandboxes, and creatures and things in nature).

Elena: Kindergarten Child with an Orthopedic Impairment

Elena is a young kindergartner identified with an orthopedic impairment—a disability involving bones or muscles. She needs adult assistance for walking and cannot move her hands. She communicates using an eye gaze device and facial expressions, such as raising her eyebrows and making eye contact to confirm (say "yes") and looking away to say "no." During free play Elena's friends were into making bracelets with beads. She expressed an interest in making bracelets too. Her teacher was unsure how she was going to facilitate the making of a bracelet by someone who did not have functional use of her hands. The teacher reflected for a moment and realized that what she was doing was engaging in a thought process that highlighted Elena's weakness instead of focusing on what this child could do. Given that this was a collaborative activity—all of Elena's friends were sitting together stringing beads—her teacher suggested that they would show her two or three different beads at a time, Elena would select the ones she wanted using her eyes, and one of her friends or the paraeducator who supported her would string them together for her. This turned out to be a huge success. Elena was able to participate meaningfully in a fun and engaging activity with her peers. Once the teacher was able to think beyond Elena's stringing the beads together herself, she successfully devised an alternative way to include her in the play.

Participation

In an inclusive classroom community, teachers intentionally design, scaffold, and modify play experiences to encourage children's participation to the best of their ability. A well-designed physical environment encourages children's exploration and autonomy and includes the use of supportive positioning or adaptive equipment when needed to support children's play experiences. Through careful observations, teachers follow the child's initiative and offer additional time and opportunities for practicing skills. It may be helpful to work with specialists and family members who are familiar with the child's individual characteristics, as needed.

In order for children to have opportunities to actively participate in play, teachers must create an atmosphere of belonging for all children. It is important to facilitate opportunities for individual exploration based on each child's unique developmental characteristics, temperament, strengths, and interests. One strategy for helping children expand their play skills is to place some of their favorite materials with a variety of characteristics throughout the environment. For example, if a child is especially interested in ball play, teachers can provide balls with different materials, sizes, and features (lights, sounds, textures) throughout the classroom, and model playing with balls in different ways (rolling, tossing, bouncing). Teachers can also encourage children to engage purposefully with objects and other children through intentionally facilitating play and engaging children in opportunities for creative expression, such as sensory, movement, music, and art experiences. By ensuring that materials are usable by a wide variety of children, participation is made easier (see figure 10).

Figure 10. Steps for Adapting Materials for Use by All Children

Chart by Kirsten Haugen. Modes for adapting toys based on materials
from the "Let's Play" Project at the University of Buffalo.

Steps for Adapting Materials for Use by All Children					
Steps	**Blocks**	**Dramatic play**	**Art**	**Reading**	**Balls**
Examples of Universal Design	Blocks with texture, sounds, or color-coding by size	Costumes with large openings and simple closures	Scented playdough	Books with sound, textures, high contrast, and/ or easy-to-turn pages	Choose balls with textures, tails, scents, sounds, and/or lights
Ways to Adapt					
Build it up *Make handles, buttons, and knobs easier to use*	Experiment with blocks of different sizes and shapes	Use large handles and knobs; make sure doll cradles, etc. are at usable heights	Wrap crayons or paintbrush handles with foam to make them easier to grip	Add page fluffers, or tabs for turning pages	Inflate or deflate a ball as needed; add a tail
Stabilize it *Keep things from sliding or tipping so a child can focus on play*	Try blocks that stick together with Velcro* or magnets	Use clay to temporarily stabilize a pan on a toy stove so a child can stir	Drawing and painting on vertical surfaces helps kids position their hands more naturally	Use a book stand, clipboard, or bean bag snake to hold a book open and steady	Add water to an inflatable ball to slow it down and after the play experience
Simplify it *Make a task easier or more obvious*	Use fewer blocks; start a tower for a child	Keep the space organized and predictable, even when changing themes	Work in stages, with fewer materials at a time	Add picture symbols to the page to correspond to the words	Try slow balls, such as those made of cloth; put a basket on the ground to play basketball
Contain it *Keep an activity within range; help a child know where to be*	Play with blocks on a table with a raised edge	Use different color flooring to designate the housekeeping area	Paint using bingo markers, squeeze bottles, or other no-spill containers	Provide a cozy place for reading—a bean bag chair, or even an indoor tent—to block distractions	Use a tetherball, or roll a ball inside a Hula-Hoop placed on the floor
Add sensory cues *Use color, sound, texture, symbols, or scents to make materials more usable or fun*	Some blocks have different colors and textures; some make sound when shaken	Add 3D labels onto shelves where materials go—an outline of a shirt on the shirt drawer	Add clove or mint oil to playdough	Provide textures on the pages, or add a box of props; use removable highlighter tape to emphasize words or pictures	Try knobby or webbed balls, balls that light up or make sounds
Use alternatives *Incorporate special devices and equipment into daily activities*	Stack bean bags instead of blocks	Provide communication devices in dramatic play areas so children can add sound effects, comments, and more	Use an ability switch to operate a spin art; paint a child's wheelchair tires and drive across butcher paper; roll painted marbles on paper in a box	A child can turn pages and listen to stories using electronic books; the words of a story can be recorded on a communication device	Play catch with a toy car or balloon instead of a ball
Encourage cooperation *Everyone does their best; everyone gets what they need*	One child can build a tower for another to knock down	A child who uses a wheelchair can be a truck driver, train engineer, etc.	One child can decorate paper with spin art; another child can cut out designs	The repeated lines of a story can be recorded into a communication device	Let a child push a ball down a ramp instead of rolling or throwing it; another child can catch it and set it up again

The development of an inclusive classroom community promotes social awareness and positive social relationships among children. Teachers may use a variety of individualized support strategies to promote social competence and foster friendships, including curriculum modifications, embedded learning opportunities, and child-focused instructional strategies (Sandall et al. 2019). Teachers must plan for inclusive environments both inside and outside. Max, a transitional kindergarten (TK) teacher, explains how he collaborates with the inclusive preschool program on-site to create an inclusive environment for the children during recess (Sandall et al. 2019):

> Our TK classroom shares the playground with an inclusive preschool program and we have one shared outside playtime together. During this time, there are additional trained adults on the playground to support the preschool children, including those with disabilities. The aides bring bubbles, chalk, and other playground equipment that my TK students do not usually have access to. During this shared playtime all the children are given free range to play with whatever and whomever they like. The TK children often approach to engage with the children with disabilities, to draw chalk with them, blow bubbles, or play catch. As a TK staff, we work to support these interactions in a very child-directed way. For example, the TK yard aide (the adult assigned to supervise the TK children during outdoor play) has noticed that all of the children benefit greatly from these joint playtimes. The preschool staff appreciate how the children create shared meaning through their joint play. The TK yard aide also appreciates the additional adults on the yard which helps to create more of a community feel for all of the children. She encouraged me as the TK teacher to work collaboratively with the preschool staff to explore how we can bring this collaborative play into our TK classroom and extend the children's opportunities to experience an inclusive play culture with their peers.

Curriculum modifications are simple changes to classroom learning areas, planned activities, or daily routines in order to facilitate a child's participation and interactions. For example, if a teacher wants to support a child's use of language to make requests, the teacher may place a desired item nearby, but out of the child's reach, in order to encourage the child to request the item. Many more examples and ideas are available in the CDE publication *Inclusion Works!* (CDE 2021).

Teachers can create **embedded learning opportunities** by intentionally focusing on a child's individual learning objectives within existing daily routines and activities. For example, in order to encourage a child to take turns with peers, the teacher could intentionally facilitate opportunities for the child to engage in play experiences that require two children to work together, such as passing a toy to each other, filling and emptying a bucket, or playing catch with a ball.

Child-focused instructional strategies are highly systematic, frequent, and carefully planned in order to provide multiple opportunities for a child to practice specific skills throughout the daily routine. For example, if a child has difficulty taking turns with a favorite toy, the teacher can create frequent opportunities for the child to experience briefly giving up a toy and getting the toy back.

With any of these individualized support strategies, it is important to acknowledge and build upon children's strengths and interests in order to promote success and ensure that they engage in enjoyable play experiences.

Supports

Quality frameworks (e.g., program quality standards, early learning standards and guidelines, and professional competencies and standards) should reflect and guide inclusive practices to ensure that all early childhood practitioners and programs are prepared to address the needs and priorities of infants and young children with disabilities and their families. (DEC/NAEYC 2009)

In order to create meaningful opportunities for children to engage in inclusive play, teachers must work in partnership with family members and specialists who are familiar with a child's individual strengths and skills and have techniques for promoting optimal development. Incorporating individualized supports into a child's daily routines and play experiences enhances opportunities for active participation, belonging, and enjoyment. Program policies should outline strategies for effective, ongoing communication and collaboration with family members and specialists.

Similarly, it is essential for teachers to have opportunities to strengthen their knowledge and skills through professional development experiences, such as training, coaching, or coursework related to inclusive practice.

This may also include observation of family members or specialists as they demonstrate individualized strategies that promote a child's successful participation in inclusive play, as well as participation in individualized coaching to support implementation of strategies within a child's regular daily routines and play experiences with peers.

Summary

Inclusive play is a human right for all children, including those with disabilities, in educational and recreational settings. To advance the child's right to social inclusion in play, it is important to move beyond outdated conceptions of disability. While exploring ideas and discussing ways to foster inclusive play in early childhood settings, using a strength-based approach based in recognizing different kinds of learners supports the need as a society to embrace diversity in learning, being, thinking, and doing.

Philosophies that drive Universal Design for Learning shift the paradigm for the design of inclusive play environments that create opportunities for inclusive play experiences. A central aspect of these practices is acknowledging the varied ways children exhibit their interests and skills within a variety of play contexts. The tools and strategies shared in this chapter will help teachers cocreate with children a play culture that transcends differences and is inclusive of diversity—a play culture in which adults are responsive to the many ways that children play, communicate, and relate to one another—which will affirm diversity as the norm.

Key Take-Aways for the Early Childhood Classroom

- Children with disabilities, like all children, have an innate desire to play, form friendships, and be accepted as members of their peer group.

- Inclusive play is beneficial for all children. It provides the opportunity for children with or at risk for disabilities to experience the positive impact that play has on development and overall well-being. It also allows typically developing children to view the world through a different, more diverse lens.

- Inclusive environments focus on children's strengths, interests, and abilities. Teachers support children's exploration and discovery instead of limiting their access to play experiences.

- In an inclusive classroom community, teachers intentionally design, scaffold, and modify play experiences to encourage children's participation to the best of their ability.

- To support inclusive play, teachers work in partnership with family members and specialists who are familiar with a child's individual strengths and skills and have techniques for promoting optimal development. They incorporate individualized supports into a child's daily routines and play experiences to enhance opportunities for active participation, belonging, and enjoyment.

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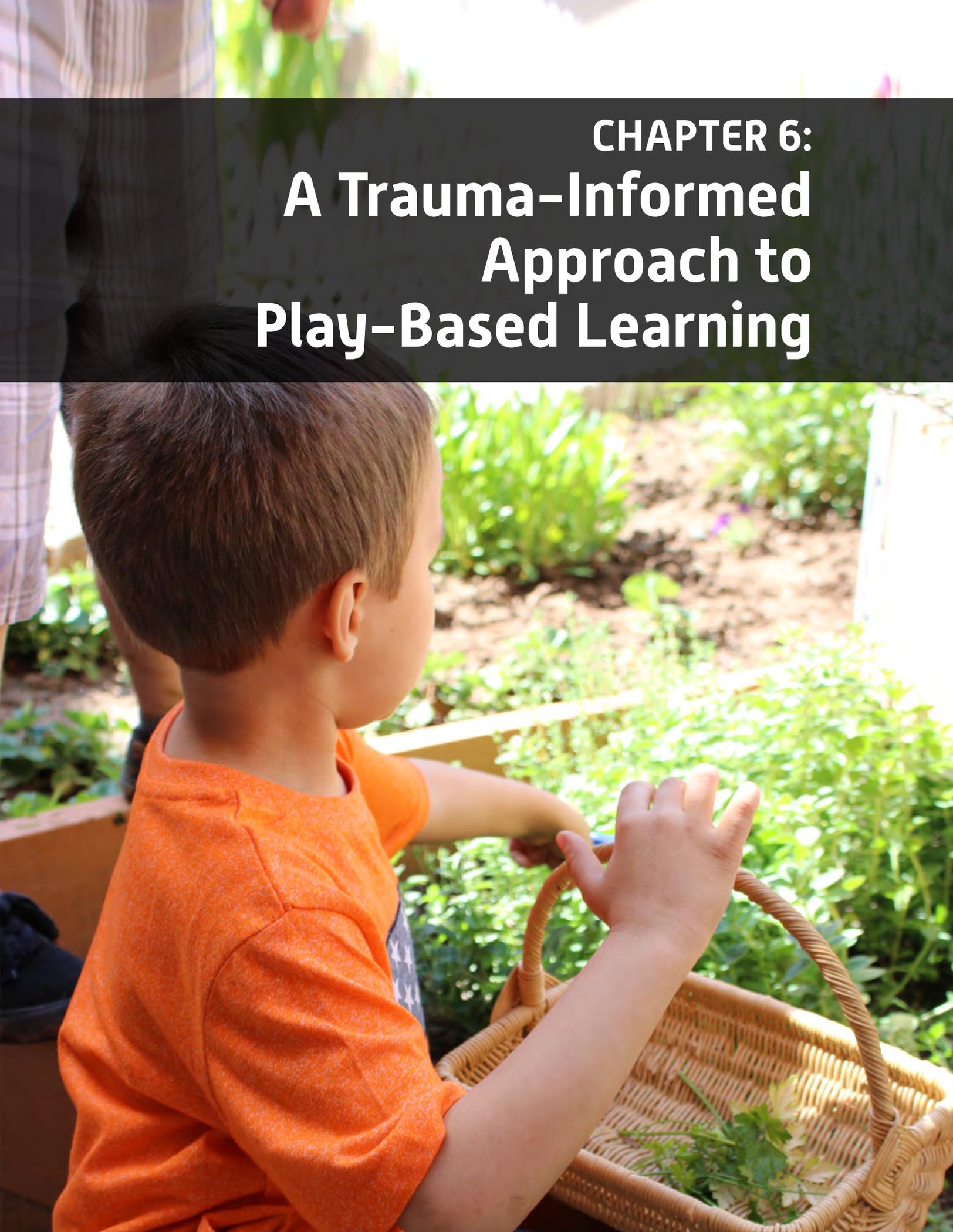
This chapter:

- Describes the impact of stress and trauma on young children's learning and development
- Introduces the impact of trauma on children's play
- Highlights how play is an essential context for helping children process and heal from trauma
- Discusses strategies for managing difficult themes, including the reproduction of inequalities and structural oppressions in society and complex behavior in play
- Provides suggestions for creating trauma-informed play-based programs that support and heal children and encourage self-care for teachers
- Provides referrals for mental health support

Play provides an essential context for children to organize their experiences, especially those that feel scary, overwhelming, or traumatic. It is through play that adults have a window into children's inner worlds (Landreth 2012). Many children express their thoughts and feelings more fully and directly through play than they are able to do verbally because young children's emotions are often inaccessible to them at a verbal level. For children who experience trauma, play is a powerful tool that provides them with a context to transform the experiences that are overwhelming, frightening, and unimaginable into manageable and predictable events that they have control over. A child who was in a terrible car accident uses play to position themself with power and control by driving the ambulance and becoming a rescuer who saves everyone. Similarly, a child whose home was flooded during a hurricane creates a play frame to imagine having magical superpowers and the ability to make the rain stop at the snap of the fingers. In these ways and many others, children use play to help cope with and heal from the most emotionally impactful events in their lives.

Because a significant number of children affected by trauma are entering early childhood programs, it is essential that teachers and administrators learn about trauma and its impact on young children's learning and development, including their play. The traumatic experiences

children endure influence whether they feel safe enough to play, the types of play they engage in, and the specific forms of trauma-informed support they require from their adult caregivers. These topics are addressed in this chapter.

The Impact of Stress and Trauma on Young Children's Learning and Development

Half of the children in the United States have experienced one or more types of serious trauma (Sacks and Murphey 2018). Trauma can be defined as "an actual or perceived danger that undermines a child's sense of physical or emotional safety or poses a threat to the safety of the child's parents or caregivers, overwhelms their coping ability, and impacts their functioning and development" (Nicholson, Perez, and Kurtz 2018).

Traumatic experiences, whether real or perceived, are threatening and create intense feelings of helplessness, powerlessness, or terror and, in the absence of protective supports from an adult caregiver, can have lasting and devastating effects on a child's physical, mental, and spiritual health (APA 2008; SAMHSA 2014; DeCandia, Guarino, and Clervil 2014). Infants and toddlers are the most vulnerable age group for trauma and experience the highest rates of child maltreatment (Stevens 2013).

Learning how to manage stress is a normal part of children's development. In typical circumstances, children receive support from adults when experiencing stress. Children who have supportive adults to buffer or decrease their feelings of being overwhelmed and fearful during a stressful experience are guided in their development of important coping skills to manage the inevitable stress and setbacks they face throughout their lives (Murray, Rosanbalm, and Christopoulos 2017). However, when children experience frequent, severe, or prolonged exposure to maltreatment or other forms of trauma and do not have a caring adult available to consistently reduce their distress, their stress becomes toxic and can disrupt and harm their development and ability to learn. Toxic stress is associated with a continual triggering or activation of a child's stress response system. When the amygdala and hypothalamus, two parts of the limbic system in the brain, perceive danger (toxic stress or traumatic experience), they automatically sound an alarm to other areas of the brain and activate the stress response system, which releases stress chemicals (e.g., adrenaline,

norepinephrine, cortisol) throughout a vulnerable child's developing brain and body.[6]

What happens when a child's stress response system is activated over a long period of time? When stress chemicals like cortisol are continuously released in the body and the levels are elevated on a persistent basis—as is the case with children who experience toxic stress—young children's developing brains and bodies can be negatively affected. These children can be left with a flood of hormones that are never properly released from their bodies, which can cause both short- and long-term negative consequences. The most significant negative impact is on the actual structure of the child's brain—both underdevelopment of the limbic brain and neocortex and overactivation of the right hemisphere of the brain can occur. When children repeatedly experience stress, especially toxic or traumatic stress, and do not have supportive relationships with adults who can buffer their stress, this can result in poorly developed and damaged stress response systems—alterations in the very neural tissue and architecture of the brain—that impairs their ability to learn and pay attention, cope with daily stressors, and self-regulate their emotions and behavior— consequences that can endure throughout their lives. Early trauma can also weaken children's immune systems; increase blood pressure and blood sugars; break down muscles, bones, and connective tissue; and decrease the ability to process information, communicate with others, express emotions, and manage daily stressors.

Children whose stress response systems are activated on a regular basis often come to live in a hyperaroused state (Perry 2008). Their brains perceive that they are always in danger, even though it is not the reality. When children are in this state, unexpected occurrences that seem minor to others (e.g., a bell ringing, an unknown adult entering a room, or a new food at snack time) can activate a survival response in which their brain and body react as if they are in serious danger. Survival responses include such behaviors as yelling, biting, hitting, hiding, or running away. These split-second survival reactions can be surprising and confusing for adults because they seem to come out of nowhere or the intensity of a child's behavior

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6   For more information see Harvard University Center on the Developing Child's video Toxic Stress Derails Healthy Development, located at https:// developingchild.harvard.edu/science/key-concepts/toxic-stress.

(e.g., sudden screaming) appears to be misaligned with the stimulus in the environment (e.g., a bell ringing).

Why does this happen? Young children's traumatic experiences are remembered through implicit or unconscious memories (Levine and Kline 2007). These memories are stored in children's brains and bodies through the sensations (e.g., sights, sounds, tastes, and textures) that were present at the time of the traumatic experience, when they felt frightened and helpless. After a traumatic experience, these sensations are associated with danger, which can lead to the development of trauma triggers.

Triggers are sensations that remind a child of a traumatic experience. The sound of a police siren could trigger memories for a child of witnessing community violence, for example, or the color red could trigger memories of a domestic abuse incident the child observed. Triggers automatically activate the amygdala's alarm system, and the child's brain goes into a fight-flight-freeze survival response even if the child is not in danger. Triggers are reminders for the child of the feelings of terror and helplessness they experienced during the initial traumatic event. Just being exposed to the sensation (e.g., seeing the color red, hearing a police siren) makes the child feel as if they are in danger again just as in the past. Triggering happens in a split second and, because it is an automatic survival response, is totally out of the child's control. When triggered, children are not able to express their feelings with words because traumatic memories are stored implicitly, or in sensory memories, not in words or as stories that have a beginning, middle, and end that the child can share with others.

When children's stress response systems are triggered, their brains and bodies shift into a fight-flight-freeze survival response. What does this look like for a young child? Examples of behaviors teachers might see include the following:

- Young children in **fight** mode may startle easily; be irritable or fussy; arch away from the caregiver; not want to be held or touched; or cry, scream, kick, bite, or bang their head.

- Young children in **flight** mode may not want to eat or sleep, appear restless, run from a caregiver or out of the room, hide under a table or out of sight, pull a jacket or other clothing over their heads to hide, or sit in the corner of the room and watch what is going on.

- Young children in **freeze** mode may withdraw from people, cling to their caregiver stronger and longer than usual, or seem listless or unresponsive to people or any form of stimulation. They may not vocalize or talk and have very limited interest in playing and interacting with others. They may be restricted in their play or interactions, not respond to their name, tune out, or become absorbed with something and seem completely unaware of what is going on around them. Children in freeze mode may also fall asleep when things are noisy, chaotic, and overly stimulating.

Children do not have access to the thinking part of their brains when they are triggered. Only after their brains no longer perceive that they are in danger, their central nervous systems have calmed down, and they have returned to a more relaxed state can they communicate their feelings or ideas, regulate their behavior, or engage in problem solving. This is why it is essential for teachers to remain calm when children are triggered and dysregulated. Showing anger or frustration when children perceive a threat only reinforces their feelings of fear and being overwhelmed, which increases the fight-flight-freeze behaviors that are automatically triggered by stress response systems.[7] Rigid behavior management systems are often not effective with young children impacted by trauma because of these trigger responses that occur when a threat is perceived. Children who have experienced trauma need time and responsive, attuned care to learn to form secure relationships with their adult caregivers and teachers. Inherent in this is respect for the child. Through play, attuned adults can help young children impacted by trauma learn to build relationships and eventually trust that adults can be safe, nurturing, and responsive to their needs. **Rigid behavior management systems can prevent children from learning how to build trust in others as these systems too often create a climate of fear.** And this fear leads to a cycle in which children's stress response systems are continually triggered, preventing them from playing, communicating verbally, or engaging in creative expression and logical problem solving.

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7   Children's fight-flight-freeze survival responses are often perceived as challenging for adults; however, to emphasize person-first and trauma-informed language, they are intentionally not described as "challenging behaviors." With increased knowledge of children's brain development, toxic stress, trauma, and trauma-informed approaches that build resilience, adults can help children feel safe, reduce the activation of their stress response systems, and strengthen self-regulation and social–emotional skills.

Trauma and Young Children with Disabilities*
and Special Needs

Children with intellectual and developmental disabilities (IDDs) are at greater risk for trauma and adverse experiences. IDDs can be genetic (dwarfism, cystic fibrosis, sickle cell anemia, Tay-Sachs disease) or neurological (autism, epilepsy), or can affect neuromotor processes (cerebral palsy, spina bifida), mental health (depression, anxiety), cognition (Down syndrome, fetal alcohol syndrome, fragile X syndrome), or sensory processes (vision and hearing, sensory integration).

Children with IDDs in relation to typically developing children are

- twice as likely to experience emotional neglect;
- twice as likely to experience physical or sexual abuse;
- twice as likely to be bullied; and
- three or more times as likely to be in families where domestic violence is present (National Child Traumatic Stress Network 2016).

Because young children with IDDs are at high risk of experiencing trauma, teachers must continually question whether the behaviors they are observing are the result of trauma versus disability. Some children may be inappropriately diagnosed with disabilities—e.g., autism, attention deficit hyperactivity disorder, sensory processing disorder, speech and language delays, emotional disturbance or oppositional defiant disorder, intellectual disabilities, or depression and anxiety—when they are really suffering from trauma and the impact of traumatic stress on their brains and developing bodies.

*Disabilities should be understood to be a combination of biological, psychological, and social factors and not limited to biological terms.

Source: Nicholson, Perez, and Kurtz 2018

Young children whose stress response systems are continually activated need caregivers who remain calm and communicate messages of empathy, safety, and protection. **Facilitating supportive, responsive relationships with caregivers is the most important way to prevent or decrease the negative impact of toxic stress and trauma for young children.** Trauma-

informed early childhood programs can offer this type of safe and healing environment for young children.

Attunement is characterized by carefully observing children and responding to their behavior by asking, **"what is this child communicating to me about how they feel and what they need to feel safe?"** Teachers practice attunement when they focus on children's emotional state—what they say or express nonverbally through their play, art, gestures, and behavior—without judging or reacting to it, instead showing interest, curiosity, empathy, and a desire to understand, connect, and provide support.

Trauma and Children's Play

Kara, a mother experiencing homelessness, and her eleven-month-old, Ava, recently moved into a shelter after leaving the family home, where Kara was abused by Ava's father. Ava protests, cries, or becomes immobile whenever an unfamiliar adult, and in particular a male adult, enters her child care classroom. Ava rarely shows an interest in playing with toys or her caregiver.

Olivia is a four-year-old whose family is experiencing a high level of fear and uncertainty because of the sudden disappearance of her father, Manuel, who was deported without having an opportunity to say goodbye. Olivia's teachers report a steady increase in behavioral challenges during her transition to outdoor play. Olivia becomes hyperaroused—she hits and grabs the other children's toys and often cries out "¡Papi, te quiero!"

James is a six-year-old who attends first grade at an elementary school in an urban public school district. He recently witnessed, from the playground of his school, a drive-by shooting of a high school student who was walking by. Now James often refuses to go outside for recess unless his teacher holds his hand and stays nearby. During choice time inside the classroom, he often builds graves with plastic building blocks for the "bad, shooting guys."

(Adapted from: Nicholson, Perez, and Kurtz 2018, 140, 163, 176)

Children like Ava, Olivia, and James who are exposed to trauma and whose stress response systems are easily activated often feel unsafe and too frightened to play or, in some cases, may reenact their traumatic experiences in play. Taking attention away from the here and now to enter into a play frame where they can pretend to be other people and characters and participate in a variety of adventures requires cognitive energy that they do not have available. Children with histories of trauma commonly receive signals from their brains that their very survival depends on maintaining an alert state and constantly scanning their environment for danger (e.g., tracking the adult to prevent abandonment, competing with other children for toys and materials). Yet, teachers who understand the power of play can create opportunities for children impacted by trauma to engage in play facilitated by responsive and attuned adults in order to build feelings of safety and trust.

How Does Trauma Affect Children's Play?

Nicholson, Perez, and Kurtz (2018) and Sorrels (2015) shed light on the effects of trauma on children's play:

- Infants exposed to trauma may show very little engagement with toys and little interest in interacting with others in a playful manner.

- Toddlers' play often has a chaotic and purposeless quality.

- Because children often embed their fears and worries in play, preschool children may be too scared to engage in imaginary play. Representing their own life experiences in imaginary play may prove to be too overwhelming and frightening. They may need structured and sensory-based materials (puzzles, pegboards, water table, sand table), because these toys have a single purpose and do not require peer contact, communication, or an ability to tell the story of what happened to them.

- Often, children affected by trauma have no joy, adventure, or imagination in their play. When they play, they might repeat the narrative of their trauma over and over, with negative emotion and aggression as key elements in play that feels stuck. In this case, they may need teachers to help them think of alternative endings to their traumatic play narratives (instead of dying in the story, the child becomes the hero who survives the scary fire that burned down the

house) or assist them in engaging in different types of play in the classroom (moving from the dramatic play area to sand or water play).

Many children who do not know how to play have had to attend to their own survival needs. Trauma can lead children to develop an internal working model of the world that tells them that their very survival depends on maintaining a vigilant state (Koplow 2007).

When children enact a traumatic experience over and over in reenactment play, they can turn an overwhelming and frightening event into one that is predictable and that they feel a sense of control over. Pattern and repetition is key to creating predictability and a sense of control for a child. This is why it is not unusual to see a child reenacting worries and concerns in play in a manner that can appear stuck to observing teachers. For many children, this repetition is helpful—the surprise and fear of the trauma becomes familiar and predictable and therefore under their control.

Perry and Szalavitz discuss this phenomenon in their book on child psychiatry: "To restore its equilibrium, the brain tries to quiet our sensitized, trauma-related memories by pushing us to have repetitive, small 'doses' of recall. It seeks to make a sensitized system develop tolerance" (2006, 54). As tolerance is developed, children will change their reenactment play. Once this transition occurs, children have agency to change the narrative. For example, the child who felt powerless after their house burnt down can rewrite their own story and become a hero. Or the child who felt they had no control after an invasive medical procedure that completely overwhelmed their ability to cope can rewrite the narrative, inserting several coping strategies that lead them to survive and thrive in spite of the challenge.

It is not uncommon for children affected by trauma to have play that is infused with negative affect and aggression. The themes in children's reenactment play can be disturbing (violence, death, injury, fear, abandonment), which can frighten other children and adults.

> **For children to engage in play, they must trust that their primary caregivers will keep them safe and ensure that their basic needs—including food, water, and protection—are met.**
>
> When children are preoccupied with their own survival, they are prevented from using cognitive energy to imagine new and interesting possibilities for their toys and play materials or entering into imaginary play frames that depart from the world right in front of them (what they perceive).

How Can Teachers Manage Difficult Content in Children's Play?

Children are very good at choosing content to include in their play that helps them organize their experiences or work through the concerns and fears they are struggling with internally. It is important that adults learn to trust that children will communicate what they need to work on through play.

Play with disturbing topics often provides children with opportunities to reverse their reality, instead becoming protagonists who have power and control in their story. Children use play to learn about how it feels to be powerful, to have a voice in decision-making, to be physically and emotionally strong and capable, and to be in contexts in which they are listened to by adults and taken seriously. Play provides children with a safe context to acknowledge and express their authentic range of feelings, which helps them make sense of what they observe and experience in their lives (whether a disturbing image on the news or a frightening experience), process it, reduce their feelings of being overwhelmed, and help them gain control of their big emotions. This process prevents children from having to hide parts of themselves; this is critical because hiding becomes the foundation for developing a sense of shame and self-doubt.

Because children use play to process and heal from trauma, banning this play deprives children of an essential vehicle for meeting their needs (Levin and Carlsson-Paige 2005). With the prevalence of young children's exposure to trauma, there is a tremendous need to create safe spaces where they can use play to support their ability to cope and heal.

As children typically use play to explore observations they make in the world and to understand the social order, it is also natural for children to act out the inequitable power relationships and structures they see around them (e.g., racism, classism, sexism, ableism, and other forms of oppression). **It is important that early childhood teachers acknowledge that children can and do reproduce the inequities that are all around them in their beliefs, behaviors, and play, even at very young ages.** Traditional child development theory describes children as innocent and egocentric, which led to false assumptions—still widely accepted today—that children are not aware of power differences and inequities in society or capable of participating in hurting and discriminating against others. It is now understood that children reproduce the harmful behaviors they see modeled for them by adults in their families and communities in their daily play with peers.

It is important for early childhood teachers to acknowledge this fact. **It is the responsibility of teachers to not shame or get upset with children when this behavior is observed but, instead, to teach.** The first responsibility is to the children who are harmed, to provide them with support, safety, and protection. The next responsibility is to the child whose words or behavior led to the harm. The approach should be one of teaching and not punishing or shaming. The goal is to guide children in learning about how their words or behavior impacts their peers and others—both positively and negatively—and to continually focus on the shared agreements and values of the classroom community (e.g., treating one another with respect, caring for oneself and others, making good choices). When children are observed using language or behaving in ways that discriminate, tease, exclude, or otherwise harm others, teachers have a range of options available for educating them—these are the most critical teachable moments. Several strategies are outlined below that teachers can use to effectively respond to challenging interactions in the classroom where children's words, behavior, and play reflect the biases they are learning from the world in which they live.

So, What Can Teachers Do When They See Difficult Themes in Children's Play?

Diane Levin and Nancy Carlsson-Paige wrote two significant books for early childhood teachers that describes how teachers can effectively

respond to children's fascination with war and weapons play (1990, 2005). Many of their recommendations are applicable to any content in children's play that may be disturbing or frightening for children and adults. Following are suggestions drawn from their work that teachers may find helpful for guiding their responses to difficult themes that emerge in children's play.

Start by observing and learning as much as possible about the children's play. Play can teach adults a lot about how children are feeling and how they need to be supported by their caregivers. When teachers observe play, they can first try to answer the following questions to evaluate its nature and quality:

- What are the most important themes? What concerns, worries, or questions is the child expressing through play (e.g., fear of separation from a parent, powerlessness)?

- Does the play give the child a sense of empowerment and resolution in the final phase?

- How does the play change over time? Is the child primarily imitating what they have seen? Or does the play begin with imitation and then shift to more varied and elaborate play?

- More specifically, how much variation do you see with characters, narratives, and props? Does the child invent a new story or develop new characters or roles for those characters—is the child comfortable enough to experiment freely with major changes to the original idea?

- Is the child bringing their everyday experiences into the play? Is the child making up ideas of their own to add to the lived experiences represented in the play?

- How much of the child's total playtime involves this theme?

Evaluate the nature and quality of the play. Key for teachers as they observe and evaluate is determining whether the play is primarily **assimilation** or **accommodation**. **When assimilation predominates, the child is in control of the content.** Children may not only incorporate aspects of their lived experience in a play frame, but also add their own ideas, characters, and plot twists and turns to craft a narrative that is fluid and will likely expand, deepen, and advance their feelings of competence and agency.

When accommodation predominates, children imitate the narratives they observe in the world—both the real world and the virtual world of television, movies, and devices. The content in this type of play primarily comes from the outside world and the child's inclination to make sense of experience, creativity, and agency are not activated; therefore, they are less likely to learn and develop through this type of play. **It is important to help children assimilate rather than accommodate lived experience in play because assimilation leads to healing, coping, and resilience.**

When play in which accommodation or imitation predominates is observed, teachers can try the following:

- **Describe to the child what is observed with brief comments:**

  "It looks like the two robbers are fighting."

  "It looks like the baby is feeling scared that her mom left her."

- **Follow up with open-ended questions:**

  "I wonder if the robber is going to be hungry for dinner?"

  "I wonder if the superhero's brother knows where he is? What would he say if he saw him climbing that really tall building?"

  Such comments and questions communicate to children that their teacher is interested in their play and takes the content they are working through seriously. If a child has been reenacting play with a repetitive theme for a long time without any variation, providing brief comments and asking open-ended questions can be a low-intrusive strategy for guiding them to shift from accommodation to assimilation in their play. Link the comments and questions to daily events and rituals that are familiar to the child ("Does the monster brush its teeth before bed?"), special events in the child's life ("Do you think the scary witch ever gets invited to birthday parties like the party your sister is having on Saturday?"), as well as experiences that are traumatic for the child ("The little bear is hiding under the desk. I wonder if he was scared by the loud noise. Maybe it reminded him of the sound of the gunshots he heard last night.").

- **Notice the themes of greatest interest to the child and identify supports that can help them work through the specific fear, worry, or big feeling they are holding inside.** Does the child focus on killing, death and dying, feeling hungry, having a parent deployed

in the military, being abandoned, or not having a home in their play? Teachers can find books about most topics that children reveal through their play they are concerned about. In certain cases, teachers might tell stories about these themes. For instance, Vivian Paley's *You Can't Say You Can't Play* (1992) and *The Boy Who Would Be a Helicopter* (1990) provide examples of how an early childhood teacher uses storytelling to masterfully support the difficult themes that emerge in children's play. Another good example is Chandra Ghosh Ippen's *Once I Was Very Very Scared* (2016).

With books children have to create their own mental images of the story. When children see their experiences, especially difficult or traumatic events, reflected in books, they can feel less alone and fearful knowing that others have experienced what they are going through. This validation can be not only self-affirming but also essential for healing by helping children feel less overwhelmed.

- **Help the child bring familiar everyday experiences into their play.** If the content of play is coming mostly from external sources (television, devices, movies, etc.), the child may need assistance connecting the play to direct experience. Teachers can provide accessories to help children make these connections. For example, they can introduce a pillow to rest on when the battle is over or pretend food to feed the rescuers.

- **Encourage original ideas the child introduces into play.** If a child is concerned about catching a monster who is running loose or a scary dinosaur who rips people's heads off, teachers can suggest ways to extend the child's idea. For example, a teacher could ask, "can we create a trap or a jail to catch them so they can't hurt anyone?" and offer yarn, tape, or boxes to help the child have the agency to respond in a way that keeps them in control of the play.

- **Guide children to consider how the play makes their peers feel.** Children working through big emotions and difficult topics can get so involved in their play that they do not notice how their words, tone of voice, and behavior are affecting others. In the extreme, children can become so engaged in their characters and play themes that they lose control and begin hurting others. Teachers can help children to stop and notice how their play is affecting others. For example: "It looks like

that loud growl made Aiden feel worried. He ran away. Mr. Lion, let's go find a place where you can growl without scaring your friends."

When children lose control, they need teachers to kindly and firmly remind them of the class agreements and to help them redirect their big emotions. For example: "It looks like your body wants to kick right now. You seem to have some big feelings that need to come out. I can't let you kick other children. My job is to help keep everyone safe. We do have a place over here where you can kick all you want. Let's walk over there together."

- **Seek to identify possible triggers that activate a child's stress response system and lead to unsafe play.** Once triggers are identified, teachers can adapt the environment to try to prevent or limit the triggers from occurring.

Are there toys or themes that are more likely to lead to the child's feeling out of control emotionally or behaviorally?

Are there warning signs that indicate the play is becoming more problematic? Is the noise increasing? Is behavior becoming more assertive or aggressive?

Are there circumstances that make challenging play more likely to emerge (e.g., the child is hungry or tired, there has been a change in the class routine, a parent is stressed)?

Are there aspects of play that upset and trigger the teacher, rendering them less able to coregulate and support the child? Awareness of personal triggers and having strategies to help calm one's own stress response system is critical for teachers.

- **Refrain from blaming, shaming, or judging the child.** Sometimes teachers have to stop children from engaging in certain types of play when they are at risk of hurting themselves, others, or property. When this happens, it is important that teachers make matter-of-fact statements to describe what needs to happen, without judgment, blame, shame, or strong emotions. For example: "I need you to stop playing this game. I can't let you or anyone else get hurt."

A key strategy is to explain the rationale for their words or actions without blaming or judging the child. Instead of saying "Don't play like that!" or "Stop using weapons!" they can use descriptive comments

such as: "I see there is a big fight going on between the dinosaurs. We need the fight to stop now. What can you, as a T. rex, do to get out of this challenging situation?" Making descriptive comments will engage and motivate the child to problem solve with the teacher instead of resisting the request. This approach will also prevent feelings of shame from developing in young children whose play needs to be redirected or stopped.

- **Always intervene when children make stereotypical or prejudicial remarks.** It is important for teachers to name and discuss stereotypes—generalizations about a group of people that are not true of everyone in that group—when they are observed, and explain how they are unfair and can hurt people, then offer clear, accurate information that contradicts the stereotypes and false ideas. Words like "most" or "many" are more accurate and fair than "all." For example: "It's true that many boys in our class like to play soccer during recess. But so do some of the girls. Other boys in our classroom prefer reading, creating towers with blocks, or playing with our class bunny."

Creating Trauma-Informed Play-Based Programs

Anthony is riding a tricycle at his preschool when a loud airplane flies overhead. He starts to cover his ears and screams repeatedly "no, no, no, no" over and over. His preschool teacher, Lawanda, walks over to Anthony, bends down to his eye level and using a calm and reassuring voice tells him, "Anthony, you are safe, you are here in preschool where the teachers will take care of you. That loud sound was an airplane way up high in the sky. You are safe down here on the ground with me. Let's take some deep breaths together."

Anthony's teacher, Lawanda, is using trauma-sensitive strategies to guide Anthony back to a self-regulated state after his stress response system was triggered by the loud sound of the airplane. Loud sounds like that remind Anthony of a serious and very scary car accident he recently witnessed on the highway that involved multiple cars and several fatalities. Whenever Anthony hears a loud sound that frightens

him at his preschool, he now runs over to his teachers and says, "Hold me and tell me I will be safe," a coping strategy he has learned by having the consistent and predictable trauma-informed approach at his preschool. Recently, Lawanda observed Anthony practicing these strategies in the dramatic play area where he was pretending to be driving a car with two dogs in the back seat. When the dogs started to bark, Anthony turned around and said to them, "You are safe, you are going to be okay." He then gestured as if he was turning on the radio in his pretend car and said, "I am putting on a song for you so you can take a nap and feel better." Through his imaginary play, Anthony was communicating how children—with the support of adults who understand traumatic stress and its impact on young children's behavior—can learn strategies to heal from traumatic experiences they have early in life. (Nicholson, Perez, and Kurtz 2018, vii)

Trauma-informed programs recognize that children's experiences of trauma affect their development, learning, emotions, and behavior, including their play. Organizations that are trauma informed use strength-based and relationship-based approaches that emphasize the importance of doing neither further harm, nor further traumatizing, when interacting with and caring for a child or adult with a history of trauma. The goal of trauma-informed programs is to buffer (reduce) a child's stress by creating an environment that reinforces the child's feelings of safety, predictability, and personal agency and control.

When teachers use a trauma-informed approach, their goal is to disrupt the pattern of negative outcomes for children who have experienced trauma in their young lives. Teachers who are trauma informed strive to understand the children they are working with, including the stories they are communicating through their words, behavior, play, and artistic expressions, as well as the underlying reasons they behave the way they do. By using a trauma lens to inform work with young children in their teaching practice, teachers commit to the following:

- Working hard to create a trusting, consistent, and attuned relationship so the child learns that adults can be safe and supportive.

- Seeking to understand the meaning of a specific behavior in a specific moment for an individual child.

- Looking for a child's patterns of behavior, including individual triggers that activate stress response systems.

- Understanding that what they perceive to be challenging behavior is children's need to communicate and gain control, because they carry with them previous experiences that left them feeling helpless or powerless. A child may be sharing a story of what happened to them and how they feel about it. They want their teachers to listen to this story and respond with empathy and a desire to help them feel safe. A willingness to learn about children's experiences—which increases understanding and leads to empathy—is at the core of trauma-informed practices.

- Striving to create an environment that communicates to the child a feeling of safety and predictability.

- Engaging in self-care in order to have enough restored energy and internal resources to support these most vulnerable children and families and to develop empathy for their experiences of trauma. Self-care can help teachers rebuild their sense of safety, support healing, and create experiences that strengthen resilience.

Being a trauma-informed early childhood teacher means
- having an understanding of the neurobiology of trauma and its impact on young children's development and ability to learn;

- acknowledging the existence and prevalence of many different types of trauma in young children's lives;

- recognizing the responsibility to learn about trauma-sensitive strategies for supporting the health and healing of young children and families instead of further traumatizing them;

- engaging in systematic self-care to replenish energy and sustain the ability to work with the extra demands of children and families with trauma histories; and

- committing to engage in ongoing reflection, inquiry, and professional learning to further the development of sensitive, caring, responsive, and attuned relationships with children exposed to trauma and their families.

Source: Nicholson, Perez, and Kurtz 2018

Early learning settings that are trauma sensitive create feelings of predictability, consistency, safety, and belonging in children's lives. Below are several recommended practices[8] for creating early learning **play-based environments that support children in healing and building coping skills and resilience** (Sorrels 2015; Nicholson, Perez, and Kurtz 2018):

- **Focus on the whole child.** This emphasizes all domains of a child's development—social, emotional, psychological, cognitive, and physical—and uses play-based curriculum and instructional practices that acknowledge the interconnectedness of these areas in young children's development and learning.

- **Provide stable, predictable, and playful routines and environments.** An early learning environment with stable, predictable, consistent, and playful routines will help children affected by trauma feel safe, enabling them to focus and learn new skills. When children feel unsafe, the ability to relax the sensory system and focus attention necessary to learn is affected. It is helpful to communicate in advance to children any change in the routine or environment (substitute teacher, change in the daily schedule) because sudden changes may trigger their stress response systems. For example, a teacher can use picture cards to show the order of activities for a day when there is a change in the planned routine.

- **Minimize the number of adult-initiated or whole-group transitions throughout the day.** Too many changes and transitions can be disruptive and scary for children who have experienced trauma. Because moving from one activity to another, particularly when done as a group, can

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8   See the California Department of Education Early Learning and Care Division's *Responsive Early Education for Young Children and Families Experiencing Homelessness* for a more comprehensive description of trauma and its impact on young children and an extensive list of trauma-informed practices for early childhood settings (CDE 2019).

cause some children fear and anxiety, minimizing the number of transitions throughout the day can reduce experiences that may trigger the stress response system. When a transition is necessary, a playful approach can be incorporated to reduce stress and scaffold children's self-regulation skills. For example, creating a play frame in which children pretend to be an animal ("eagles, fly from the rug to the sink to wash your wings for snack") brings a playfulness to the change in routine for children who would otherwise find a transition stressful.

- **Create a visual schedule to reinforce predictability and reduce children's worries about what is going to happen throughout the day.** A visual schedule includes photos that represent each of the daily activities (free play, guided play during math lab, outdoor play). It is particularly impactful if the photos feature the children in the class. Teachers can communicate what activity is next by pointing to the photo on the visual schedule and saying, "now it is time to [fill in activity]." This strategy reduces uncertainty for children with a history of trauma.

- **Create opportunities for children to communicate fears and worries and express anger and big feelings in constructive ways through pretend play, expressive arts** (drawing, painting, singing, dancing), **sensory play** (water, sand, clay), **active play, and storybooks** that draw attention to aspects of their life experiences and help them learn through the characters how to cope and solve problems. Art and repetitive rhythmic movements— including singing, dancing, walking, swinging, trampoline

work, drumming, musical activities, yoga, tai chi, meditation, and deep breathing—are helpful for calming children's sensory systems.[9] As noted throughout this book, allowing children opportunities for child-directed play every day is a trauma-sensitive instructional strategy.[10]

- **Plan for and use an outdoor classroom.** Children receive sensory input outdoors that can soothe their sensory systems and calm stress responses (chapter 4 includes a section on outdoor play). By building outdoor classroom time into the daily schedule, teachers can ensure that there is enough time for children to play outdoors

and opportunities for children to engage in physical big body play and play with loose parts. Teachers can also bring elements of the outdoors inside the classroom or child care program—leaves, branches, water, sand, and other loose parts that children can explore safely can be soothing and regulating (Sorrels 2015).

- **Provide children opportunities to release the extra energy charge that accumulates in their bodies when their stress response systems have been triggered.** Children who live with high levels of stress need opportunities to engage in large motor activities that allow them to release the additional energy in their bodies that results from the activation of stress chemicals. The early learning program may be their only opportunity to run, climb, jump, stretch, swing, ride a tricycle, or otherwise engage in big body play and release energy. Not only do these opportunities support physical development, but they also reduce the chances of long-lasting impact resulting from the stress chemicals released after a triggering event.

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9   More information is available on the Attachment Disorder Healing website located at https://attachmentdisorderhealing.com/developmental-trauma.
10 Bruce Perry describes the importance of the arts and play for regulating children's brains in a Child Trauma Academy video located at https://www.youtube.com/watch?v=ZVRO7PdYRnM.

- **Offer children choices and reinforce their sense of control through providing access to different types of play, including child-directed free play, on a daily basis.** Because young children can feel helpless and overwhelmed after experiencing trauma, it is helpful to provide them with opportunities to have a sense of control in their lives. With young children, this can be done by integrating their interests into the curriculum and by providing time for child-directed free play and open-ended materials that invite them to explore, discover, and create and that provide opportunities on a regular basis to make choices by themselves.

- **Support development of children's social–emotional skills through participation in various types of play-based learning.** Children who have experienced trauma need additional emotional support and lots of guidance and explicit teaching to learn a range of social–emotional skills, including naming and managing strong emotions, practicing friendship skills, expressing what they want and need, making choices, and applying problem-solving skills. Having social–emotional skills (taking turns, sharing toys, listening to someone else's perspective or ideas, regulating behavior) is a foundation for developing resilience and coping capabilities that will help children navigate the stress they face on a daily basis. Play is the most natural context for guiding young children's social–emotional skill development.

- **Prevent and reduce harmful disciplinary practices.** A high proportion of children of color in early education are the recipients of exclusionary and disproportionate disciplinary actions by their teachers. It is essential that programs use trauma-informed strategies when responding to any stress-related behaviors children display— fight-flight-freeze behaviors after a triggering event, for example. This approach requires a focus on de-escalation and support for calming children's nervous systems to guide them back to self-regulation, as well as more reflection from teachers. It may also require referrals for therapeutic interventions. It is crucial that children not be further traumatized by harmful disciplinary practices, including suspension and expulsion, or frightening dysregulated behavior from their adult caregivers (e.g., yelling or an angry tone of voice, public shaming). Research suggests that a lack of play in early childhood classrooms

is one of the predictive factors for an increase in suspensions and expulsions of young children (Gilliam 2016).

- **Ensure self-care for teachers.** Children who have experienced trauma or live in a high-stress environment require even more emotional and physical support than their peers. This in turn can create high levels of stress for teachers, which can become physically and emotionally overwhelming if it is not addressed through proactive and regular self-care. It is crucial for teachers, optimally with the support of administrators, to identify and implement individual self-care practices to attend to their own health and well-being so that they are able to provide emotional and physical support to the children in their care and model positive and healthy behavior. One important form of self-care—heart play—is described in the text box in the next section.

Support Self–Care for Teachers

Maintaining a consistent, caring, and calm presence with young children is an intense and demanding job. Remaining attuned and coregulating a child in distress requires a caregiver to have enormous energy reserves. Children with histories of trauma or who live with constant stress and uncertainty spend a lot of time with their stress response systems triggered. As a result, they need early childhood teachers who are physically and emotionally available to continually reinforce feelings of safety, protection, and calm, which in turn helps teachers reestablish a regulated and calm state for themselves. Working with children and families who experience intense and ongoing levels of stress can take a toll on teachers' health and well-being. Teachers can develop self-care practices to buffer ongoing stress and restore energy. If ongoing stress persists without quality self-care to heal and restore energy, it can lead to burnout. Burnout is a special type of stress—a state of physical, emotional, or mental exhaustion combined with doubts about one's competence and value (Gottlieb, Hennessy, and Squires 2004). Teachers who are experiencing burnout

- feel emotionally exhausted and overextended by their work;
- think they no longer make a difference, which results in negative, critical, and reactive attitudes toward the children and families they work with; and

- have a sense of diminished personal accomplishment—they feel incompetent and as if they are not making a difference (Maslach and Leiter 1997).

Self-care is the best prevention for burnout. Research shows that children with caregivers who are under high stress tend to have increased dysregulated behavior (Horen 2015). This is not surprising when thinking about coregulation in reverse. Teachers communicate their stress unintentionally as they interact with children who are very sensitive to adult emotions. Teachers can learn to detect warning signs that communicate that their own stress levels are increasing to an unhealthy level (e.g., they notice they are less patient, more irritable and easily reactive, or more critical of self and others). With increased self-awareness, they can engage in self-care strategies that restore their energy and allow them to avoid making choices that feel scary or unsettling to children. Teachers can also practice deep breathing and focus on being calm as they move toward a child in distress who is displaying dysregulated behavior. This self-calming routine can start the de-escalation or coregulation action with a child.

Self-care strategies are individualized and unique to each person. What feels stressful or triggering to one teacher will not to another. Similarly, the benefits of self-care practices are not the same for every teacher. Each individual has to act as a detective to discover what activates their own stress response system (a crying or clingy child? an unresponsive parent? concern about a child's exposure to violence? feedback from a supervisor? one's own economic insecurity?). Through exploring self-care and restorative activities each teacher can identify those that best support their own mental and physical health and well-being. Breathing exercises; meditation or prayer; stretching, walking, running, or other movement; talking with a colleague, family member, or friend; drinking a hot cup of tea; completing a crossword puzzle—the possibilities

are endless. What is essential is that all teachers build awareness of their stressors and make an intentional plan with two or three explicit strategies they can use on a regular basis to support their own self-care.

Teachers cannot support and heal children on their own. **Teachers' success in meeting the needs of children and families impacted by trauma is deeply influenced by the level of trauma-sensitivity of the programs in which they are working.** There are many practices that directors and administrators can implement in their programs to create a climate that supports teachers' participation in self-care (Nicholson, Kurtz, Leland, Wesley and Nadiv 2021).

- Elementary schools that use a Responsive Classroom model have, in each classroom, a Take a Break place—a location where a child can calm and refocus themself while still being able to follow the classroom activity—and similarly early childhood programs can create cozy corners where children learn to self-regulate their emotions (Responsive Classroom 2004).

- Having access to a school psychologist (in elementary schools) or a mental health consultant (in early childhood programs) can be very helpful for children who need additional support. Often these professionals can offer teachers suggestions for strategies to regulate their own emotions, including mindfulness practices and social–emotional and trauma-informed teaching practices for working effectively with children who need additional support.

- Some early learning programs begin with a morning meditation to help everyone start the day feeling grounded and connected.

Professional development for teachers can focus on adult mental health, wellness, and strategies for reflection and self-regulation.

Given the significant percentage of young children who experience trauma in their earliest years, early childhood teachers need to create trauma-sensitive, trauma-informed early learning environments. Central to trauma-informed healing environments are consistent, caring, and responsive relationships and developmentally responsive environments that lead children to feel a sense of physical and emotional safety. Through play, teachers can learn how children are thinking and feeling and what

worries they have that may be preventing their healthy development and ability to learn.

Having ample opportunities to engage in many types of play—including child-directed free play—is essential for children affected by trauma in order to heal and develop coping skills. Teachers, too, need to include play in their lives as part of their own self-care practices. **It is essential for teachers to replenish their energy daily when working with children affected by trauma,** because this work is very demanding emotionally and physically and their guidance is critical for the well-being of these children.

What Is Your Heart Play?

Barbara Brannen created the concept of heart play to describe authentic forms of play that all adults deserve to have in their lives to support mental and physical health and overall well-being. Everyone can discover their own personal forms of heart play. Brannen describes various characteristics that can act as a guide to discovering what counts as heart play for the individual. No one form of play will represent all of the characteristics listed below. Instead, they can be used to discover what forms of heart play speak to the individual and can be cultivated in one's life.

Characteristics of heart play: What experiences or activities lead to the feeling of … ?

- **Total abandonment:** An activity that leaves a person feeling like nothing else in the world matters. This is the only thing one desires to be doing in the moment and they feel complete abandonment.

- **No worry:** An activity that does not cause worry or concern. One might fret over the rules of the game or the play activity itself, but while engaged there are no thoughts about the worries of life.

- **Joy:** Heart play is discovered when one experiences the feeling of joy—a wonderfully mysterious feeling that warms the soul, puts an involuntary smile on the face, and causes the heart to pump blood in a way that nourishes the body. Joy is that feeling of "I wish this moment would last forever."

- **Clear thinking:** Heart play brings a feeling of clearing the cobwebs from one's head. It has the ability to make one feel a clearheadedness that may have only been experienced before as a result of a good night's sleep or meditation. Quality heart play lets the brain and memories operate at an optimal level because one feels so good.

- **Energy:** Rest and exercise can increase energy. Like exercise, play takes energy, but in a good way. Play moves energy around in the body in such a way that it will heal and nourish, then contribute to deeper and more restorative rest afterward. In this way play can also be an energy restorative.

- **Curiosity:** Play provides the opportunity to feel curious again. A painter is curious about what would happen if the colors changed this way or that. A hiker is curious about what is around the bend. Curiosity is fun because it leads to new discoveries and visions of things one has not thought of before. When the decision is made to be curious and playful, amazing things happen!

- **Wonderment:** Play opens one's eyes to wonderment. A sense of wonderment is felt while deep in heart play. No matter how simple the play (sewing, painting a wall, planting, biking), one has wonderment for a companion. Wonderment is that feeling of wondering what will come next. Wonderment is the feeling of light and energy. Play can bring that wonderment into one's life.

- **Pride:** Play can be a door to a world where one feels pride—pride in ability, pride in accomplishment, pride in taking a chance. When in heart play, a person is doing something that they are proud of. It is not done to get others' affirmations or approval. Nor is it done to be better than anyone. One plays for the heart—to make it sing.

- **Connection:** Play provides connection to the rest of the world and sometimes even to parts of oneself. Life is so often a jumble of things and people and places. People can begin to feel disconnected from the things they truly love, from the people they really want to be with, and from the places that nourish them. Play connects people to what they really want in life—it is different from reacting to what life throws at them each day.

- **Movement:** Play evokes a feeling of moving through life instead of standing still. It provides the momentum to not be stuck. Being stuck can mean a thousand things. People are sometimes stuck in their thinking, in a daily routine, or in a relationship, and sometimes do not even know they are stuck! Play creates a sense of movement toward things that are pleasing, and from there choices can be made about other things one likes.

- **Imagination:** All sorts of things can be imagined when one plays, and this imagining has been at the heart of one's existence since one's earliest thoughts. One can imagine being able to fly to the moon, living in that house, climbing that mountain. Childhood was filled with this feeling of imagination; one imagined being all sorts of things, and it led further and further into play. In play, as an adult, one needs to feel again what it means to imagine. Imagination is a feeling from play that warms the heart.

- **Relaxation:** When people play, they relax. This concept is so obvious and so simple that it is often taken for granted. When one plays, the body, mind, and emotions are usually very engaged in the activity. If it is a challenging form of play—mountain climbing for example—it can look anything but relaxing to the observer. However, when people are playing, they are relaxing numerous parts of themselves. They are concentrating hard on what they are doing in play, but it is a soothing kind of thought that stimulates more and more thoughts and is actually relaxing versus challenging.

  Emotionally, playing provides a shower of positive feelings throughout the entire system. Emotions are tapped into that

really nourish and relax. Sometimes the emotion is sadness, for example when crying while watching a really good movie. In this context, that release of energy, of sadness, can be restorative, cathartic, and relaxing to the system, while releasing harmful toxins, which is the body's way of letting go of things it was unable to express. Enjoying deep emotional films is heart play for some people. Theater and opera can evoke the same response. Play can bring emotions to the surface and be relaxing along the way.

- **Therapeutic:** It is easy to see the therapeutic value that play brings to people's lives in the form of relaxation. Play disperses the angst of the week and the problems of daily life. Play has wonderful benefits!

Do you have heart play in your life? If not, what is preventing you? Self-care (including heart play, which is an important form of self-care) is not just a nice thing to do. It is essential for everyone to engage in self-care to help buffer ongoing stress and restore energy. These activities are necessary to be responsive, attuned, and caring teachers for young children, especially those affected by trauma.

Call to action: Take a step to discover your heart play. Once one or more forms of heart play are discovered that are personally authentic, they can be incorporated into the daily schedule like other essential activities (eating, sleeping, etc.). Heart play is beneficial for everyone, and can work wonders to reduce stress and restore energy for the important work teachers do with children and families.

Source: Brannen 2002

Making a referral for mental health support is necessary in some cases. Teachers may need to work with an administrator to arrange for an early childhood mental health consultation. When teachers have tried implementing many of the practices and approaches described throughout this book—such as considering the play continuum, incorporating principles of UDL, creating trauma-informed play-based classrooms, and working with program administrators to utilize observation-based assessments—but there

continues to be concern that a child in their care is struggling with trauma-related or other emotional or behavioral challenges, it may be helpful to access additional support from an early childhood mental health consultant. Early childhood mental health consultants bring specialized knowledge and skills to partner with staff and families to help support the well-being and healthy development of children within early learning and care programs.

Access to early childhood mental health consultation services varies based on resources available by county or region. Some early childhood mental health consultation services focus on programmatic support to teachers and staff, and others focus more on direct consultation with children and families. The qualifications of personnel also vary based on the type of consultation being offered. The following resources provide additional information about early childhood mental health consultation:

- California Inclusion and Behavior Consultation Network—available at http://www.cibc-ca.org

- California Collaborative on the Social & Emotional Foundations for Early Learning—available at https://cainclusion.org/camap/map-project-resources/ca-teaching-pyramid/.

- California MAP to Inclusion & Belonging—available at https://cainclusion.org/camap/

- Head Start Early Childhood Learning & Knowledge Center—available at https://eclkc.ohs.acf.hhs.gov/mental-health/article/infant-early-childhood-mental-health-consultation-your-program

- Center for Early Childhood Mental Health Consultation—available at https://www.ecmhc.org/

Key Take-Aways for the Early Childhood Classroom

- As a significant number of children affected by trauma are entering early childhood programs, it is essential that teachers and administrators learn about trauma and its impact on young children's learning and development, including their play.

- Often, children affected by trauma have no joy, adventure, or imagination in their play. It may have a chaotic and purposeless quality or children may repeat narratives of their traumatic experiences over and over, with negative emotions and aggression as key elements, in play that feels stuck.

- As children use play to explore observations they make about the world, it is natural for them to act out the inequitable power relationships and unjust structures they see around them (e.g., racism, classism, sexism, ableism, and other forms of oppression).

- When adults observe children using language or behaving in ways that discriminate, tease, exclude, or otherwise harm others, they should not blame or shame them, but instead see these as critical teachable moments that require their intervention. There are many strategies teachers can use to effectively respond to challenging interactions in the classroom where children's words, behaviors, and play reflect biases they learn from the world they are living in.

- Teachers who are trauma informed strive to understand the children they work with, including the stories the children communicate through their words, behavior, play, and artistic expressions, so they can respond with empathy and effective sources of support, guidance, and intervention.

- Working with children and families who experience trauma can take a toll on teachers' health and well-being. Developing self-care practices helps teachers to buffer their ongoing stress and restore their energy. Teachers' success in meeting the needs of children and families impacted by trauma is influenced by the level of support they receive from their administrators and the trauma-sensitivity of their schools and programs.

Conclusion

Play is the highest
expression of human
development in childhood,
for it alone
is the free expression
of what is in a child's soul.

– Friedrich Froebel

Every child has the right to play. Play is a child's most natural context for exploration, discovery, and learning. Through play, children are able to organize and make sense of their world. While playing, children form hypotheses about how the world works, discover their interests and strengths, and build relationships with peers and adults. Play-based learning is where integrated learning happens. Play supports children's learning and development across cognitive, social–emotional, and physical domains. Through play, children can develop empathy for others and a foundational understanding of complex ideas including fairness, equity and justice, and the value of diversity in a democratic society.

Teachers and administrators have the following critical responsibilities in play-based programs:

- To believe in children as capable and strong

- To trust children to make decisions about their learning and acknowledge that authentic transformative learning requires that children have opportunities to take risks in their play

- To arrange environments that provide children with access to many different types of play, including spontaneous child-directed and teacher-guided play

- To be careful observers and offer guidance or facilitation whenever children's play is creating or reinforcing inequities among children— e.g., biases, stereotypes, or exclusion; to actively support children in developing empathy and an understanding of equity through play

- To be intentional about observing, documenting, interpreting, assessing, and making responsive adjustments to expand and deepen children's play in a dynamic and continual process

With a strong understanding of the different ways that children play and teachers' critical role in supporting children in learning through play, teachers and administrators can create high-quality play-based programs that provide optimal foundations for children's health, education, and long-term well-being.

**When Someone Asks Teachers
Why the Children in Their Classroom Are
"Just Playing," They Can Respond …**

When they are playing with manipulatives, they are learning …

- Math concepts: patterns, ordering and sequence, number, measurement, geometry, algebra, probability, logic
- Representation: using manipulatives to represent situations, problems
- Self-direction: making choices, making a plan and implementing it
- Scientific method: observing, making and testing predictions
- Social studies: using available resources for building and representing structures

When they are engaged in dramatic play, they are learning …

- Language: changing roles, creating a script
- Representation: using language and objects to represent situations in life
- Problem solving: human interaction, leading others to play cooperatively

When they are playing with blocks, they are learning …

- Math and science: size, shapes, weight, sorting, patterning, cause and effect
- Reasoning skills: problem solving, planning

- Social skills: cooperation, negotiation, and conflict resolution
- Literacy: symbolic representation

When they are engaged in art, they are learning …

- Representation: using art materials to represent learning from other curricular areas
- Creative expression: using color, line, form, texture, shape to express themselves
- Problem solving: using available materials to create, using "mistakes" creatively
- Language: vocabulary, descriptive words
- Cause and effect: creating change
- Task completion: staying with a task and experiencing the feeling of satisfaction involved, gaining self-confidence

**When children are playing,
they are very busy constructing knowledge!**

Source: Parent and family handout in Cathe Petuya's Transitional Kindergarten Classroom, Elk Grove Unified School District

Glossary

Big body play: "Rolling, running, climbing, chasing, pushing, banging, tagging, falling, tumbling, rough-and-tumble, [being] rowdy, roughhousing, horseplay, play-fighting. These are just some of the names that adults give to the boisterous, large motor, very physical activity that young children naturally seem to crave. All are forms of big body play—a play style that gives children the opportunities they need for optimum development across all domains from physical to cognitive and language to social and emotional" (Carlson 2011, 5).

Implicit bias: Implicit bias means unconscious attitudes or stereotypes that affect understanding, actions, and decisions. This is activated involuntarily and without awareness and can be either positive or negative. Research has shown that deficit-based biases negatively affect children of color in early childhood education, with teachers perceiving them as less innocent, less intelligent, and older than they truly are (Gilliam 2016). Research has also shown that everyone has implicit biases, but that racial and ethnic biases need to be brought to consciousness to limit their negative influence on educators' behaviors.

Inclusive play: Inclusive play refers to ensuring that all children, including those with or at risk for disabilities, have access to and the ability to fully participate in play and that they receive the support to do so.

Integrated nature of learning: Even though it is easy to think of different domains of development and learning as separate (e.g., math, language, physics, art, social–emotional), children learn in everyday activities at school and outside school in ways that naturally integrate different domains (CDE 2016b).

Outdoor classroom: The outdoor classroom refers to the intentional use of outdoor environments as places for learning and development. To be optimally supportive of children's learning, outdoor environments need to be as thoughtfully and intentionally planned and arranged as indoor environments.

Play culture: Play culture refers to the unique social and imaginary worlds children cocreate out of everyday life experiences (Wolfberg 2009). The tools, narratives, themes, and traditions adopted by a play culture often reflect and are influenced by the larger society and culture. A critical aspect of play culture is that it offers natural play-based learning opportunities with limited participation of adults. What children learn by playing with peers is qualitatively different from what they learn by playing with adults. It is within the realm of play culture where children of diverse ages and abilities gain essential skills, including social and communicative competence, language, cognition, creativity, and emotional well-being.

Play-based learning: This approach to curriculum and instruction emphasizes the use of play to support children's learning across all domains of development. A play-based curriculum is not an "anything goes" program or a commercial program with a rigid curriculum. Instead, reflective, creative teachers are central to a quality play-based program in which each child is valued and the environment and program schedule are carefully planned to meet the needs of both the individual child and the group as a whole.

Provocation: This Reggio Emilia–inspired concept refers to teachers' use of objects, activities, and the environment to intentionally "provoke" children's thinking, conversations, questions, interests, creativity, and ideas. Teachers plan and set up a provocation and then observe children, allowing them to respond in authentic emergent ways. Provocations can be anything from natural materials (beautiful rocks, branches) to books or guest speakers, among other things. They should be intentionally connected to children's interests and relevant topics of conversation and study in the classroom.

Trauma: Trauma is defined as an actual or perceived danger, which undermines a child's sense of physical or emotional safety or poses a threat to the safety of the child's parent or caregiver, thus overwhelming the child's coping ability and affecting functioning and development (Nicholson, Perez, and Kurtz 2018).

Universal Design for Learning (UDL): UDL is the design of a product, environment, or communication in such a way that a wide variety of users may use it without the need for adaptations, modifications, or specialized design.

Zone of proximal development (ZPD): The ZPD is the distance between what a child is capable of doing on their own and what a child can accomplish with guidance and support from a more capable peer or an adult (Vygotsky 1978). Play creates a ZPD for young children because they are capable of more mature and sophisticated thinking and behavior when they are engaged in a pretend play context.

Resources

National and State Organizations and Websites

Advancing Social-Communication and Play (ASAP): An Intervention Program for Preschoolers with Autism

https://www.med.unc.edu/ahs/asap/

This intervention program is designed to help teachers, therapists, and others foster the development of important communication and play skills in young children with autism, including joint attention and symbolic play skills. ASAP is intended to supplement other, more comprehensive intervention programs for young children with autism. Research supports the importance of specific efforts to improve joint attention and symbolic play skills in preschoolers with autism to help these children achieve their full potential as they get older.

ASAP provides objectives, materials, and strategies that can be blended successfully with a variety of different curricula used in public school preschool programs that serve children with autism.

Alliance for Childhood

https://www.allianceforchildhood.org

The Alliance for Childhood advocates for children's health and well-being. One of its goals is to restore play to children's lives. The Alliance for Childhood conducts public education and advocacy campaigns and publishes reports and position statements, including reports on the loss of play in early childhood.

Information on the Alliance for Childhood's work:

https://allianceforchildhood.org/what-we-do

Video resources, webinars, and articles:

https://allianceforchildhood.org/benefits-of-play

The Alliance for Childhood's report on why children need play in school: https://static1.squarespace.com/static/5d24bb215f3e850001630a72/t/5d37783aa47c990001d6cd96/1563916347932/Crisis+in+Kindergarten_complete+report.pdf

Autism Collective for Peer Socialization, Play and Imagination

https://www.autismcollective.org

The Autism Collective for Peer Socialization, Play and Imagination website offers a description of and resources about the Integrated Play Groups (IPG) model—an evidence-based practice, created by Pamela Wolfberg, designed to guide children on the autism spectrum and typical peers in mutually engaging experiences that foster socialization, play and imagination, and inclusion in peer culture. Extensions of the IPG model incorporate various forms of creative expression (visual arts, multimedia arts, drama, dance, yoga) that are culturally valued and of high interest for various age groups (children, teens, adults).

The Genius of Play

https://www.thegeniusofplay.org

The Toy Association's Genius of Play website includes resources and tips for families and educators.

- The Expert Advice section provides articles on a variety of topics by scholars and professionals that focus on play. Topics range from play with children with disabilities or sensory processing disorders to the power of play for language development. http://www.thegeniusofplay.org/tgop/expert/genius/expert-advice/expert-advice-home.aspx?hkey=cdff7567-680b-4058-becd-0416fa9459cd

- In the Play Talk section, experts on education, childhood, and play share the latest information and research about the importance of play and childhood development, as well as useful tips. http://www.thegeniusofplay.org/tgop/community/genius/community/community.aspx?hkey=2ce2c4e3-ae95-4e48-a3b8-9eebaffa99dc

Harvard University Center on the Developing Child Community of Practice on Play

https://developingchild.harvard.edu/collective-change/learning-communities-in-action/community-of-practice-on-play/

The Harvard University Center on the Developing Child Community of Practice on Play (CoPP) is dedicated to increasing the understanding, appreciation, and presence of play in the early childhood sector. CoPP's members include global and domestic researchers, practitioners, developers, nonprofit leaders, and policymakers.

Head Start Early Childhood Learning and Knowledge Center

https://eclkc.ohs.acf.hhs.gov/

One of Head Start's guiding principles is: "Teaching must be intentional and focused on how children learn and grow. Children are active, engaged, and eager learners. Good teaching practices build on these intrinsic strengths by providing developmentally appropriate instruction and opportunities for exploration and meaningful play." In addition, the importance of play is acknowledged in the Head Start Program Performance Standards: "A program must ensure teachers implement well-organized learning environments with developmentally appropriate schedules, lesson plans, and indoor and outdoor learning experiences … " There are several resources on the Head Start website that support this goal, including the following:

- News You Can Use: Play
  https://eclkc.ohs.acf.hhs.gov/curriculum/article/news-you-can-use-play
- Outdoor Play Benefits
  https://eclkc.ohs.acf.hhs.gov/learning-environments/article/outdoor-play-benefits
- 10 Tips to Enhance Your Outdoor Play Space
  https://eclkc.ohs.acf.hhs.gov/learning-environments/article/10-tips-enhance-your-outdoor-play-space

International Play Association USA

https://www.ipausa.org

The International Play Association (IPA) USA is the US affiliate of IPA World, an international and nongovernmental organization founded in Denmark in 1961. The mission of IPA USA is to "protect, preserve, and promote the child's right to play as a fundamental human right."

National Association for the Education of Young Children (NAEYC)

https://www.naeyc.org/

NAEYC is a professional membership organization focused on developing and disseminating knowledge on high-quality early childhood education and experiences for children from birth to eight years old. NAEYC has developed a series of resources focused on the importance of play in early childhood education: https://www.naeyc.org/resources/topics/play

These resources include, for instance, the webinar "Enhancing Knowledge and Skill Development by Gently Guiding Play" with psychology expert Kathy Hirsh-Pasek and policy analyst Shayna Cook: https://www.youtube.com/watch?v=xvMV1gf_Ibk

The article "Our Proud Heritage: Outdoor Play Is Essential to Whole Child Development" is another useful resource:

https://www.naeyc.org/resources/pubs/yc/jul2017/outdoor-play-child-development

National Institute for Play

https://www.nifplay.org

The National Institute for Play compiles research from play scientists and practitioners, conducts projects to expand the scientific knowledge of human play, and translates this body of knowledge into programs and resources.

Playworks

https://www.playworks.org/about/

Playworks is a nonprofit organization dedicated to improving the health and well-being of children by increasing opportunities for physical activity and safe, meaningful play. Playworks offers comprehensive training and technical support to schools and communities that wish to bring safe, inclusive play to children and provides trained program coordinators to organize recess activities and run after-school tutoring and physical activity programs in low-income urban districts. Playworks consultation and professional development work includes emphasis on inclusive play settings, social engagement, and risk. Videos and other resources are available on the Playworks website:

- https://www.playworks.org/impact/
- https://www.playworks.org/resources/

Reusable Resources Association

Reusable Resources Association is a nonprofit organization that promotes and supports the development of reusable resource centers. Reusable resource centers are sustainable, cost-effective innovative partnerships that locate, collect, and redistribute a variety of unique and enjoyable materials to inspire and support creativity and innovation in education. They serve children, teachers, parents, artists, and others; members of local schools; child care centers; Head Start and after school programs; and assisted living facilities. A list of resource centers is located here:

http://www.reuseresources.org/find-a-center.html

We Build Fun

We Build Fun is a commercial playground supplier at various levels including parks, apartment complexes, schools, and daycares. The website features a blog with ideas and information on inclusive play, including the following:

http://www.webuildfun.com/the-importance-of-inclusive-play-for-all-children

Zero to Three

https://www.zerotothree.org/

https://www.zerotothree.org/espanol/ (Spanish language site)

Zero to Three is a nonprofit, membership-based organization that collaborates with other national organizations and agencies to disseminate the science of early childhood through resources, practical tools, and policies accessible to parents, professionals, and policymakers. Zero to Three has a focused line of work centered on the importance of play.

Play-based resources and tools: https://www.zerotothree.org/early-learning/play

A description of how play develops from birth to three years old and examples of play for these age groups:

https://www.zerotothree.org/resources/series/the-development-of-play-skills-from-birth-to-3

Research, Reports, and Fact Sheets

Anji Play

http://www.anjiplay.com/home/

Anji Play is an internationally recognized philosophy and approach to early learning developed and tested over the past 18 years by educator Cheng Xueqin with a focus on returning "the right of self-determined play to children and communities in an environment defined by love, risk, joy, engagement, and reflection." For both parents and educators interested in Anji Play, this website offers access to resources, media, network connections, and related information on the benefits of healthy risk for children's learning and development.

Encyclopedia of Early Childhood Development: Play

http://www.child-encyclopedia.com/play/resources

This page provides a synthesis of research, access to resources and expert articles, including topics such as "play and disability" and "play and culture," as well as the option to download all this information in a single report.

The LEGO Foundation Reports

https://www.legofoundation.com/en/

The foundation branch of the LEGO Group aims to raise awareness of the importance of play through research, resources, and collaborations with other key organizations and agencies. Their programs can be accessed at https://www.legofoundation.com/en/what-we-do/programmes-and-projects/

The LEGO Foundation has published the following white papers on the importance of play:

- Learning Through Play: A Review of the Evidence
  This white paper summarizes current evidence on the role and importance of children's learning through play.
  https://www.legofoundation.com/media/1063/learning-through-play_web.pdf
- The Role of Play in Children's Development: A Review of the Evidence
  This white paper reviews the current evidence base and suggests that different types of play have a role in supporting the development

of communication skills, abstract thought, self-regulation, and more adaptive, flexible, creative thinking.
https://www.legofoundation.com/media/1065/play-types-_-development-review_web.pdf

- Neuroscience and Learning Through Play: A Review of the Evidence
This white paper focuses on the five characteristics used to define playful learning experiences: joyful, meaningful, actively engaging, iterative, and socially interactive. From a neurobiological perspective, these characteristics can contribute to children's ability to attend to, interpret, and learn from experiences.
https://www.legofoundation.com/en/learn-how/knowledge-base/neuroscience-and-learning-through-play-a-review-of-the-evidence/

Also, the LEGO Foundation collaborated in the development of the following webinar: Using Play to Enhance Children's Hospital Experiences
https://www.legofoundation.com/en/what-we-do/playfutures/webinars/using-play-to-enhance-childrens-hospital-experiences-nov-2018/

The New York Times

After years of dismissing play in favor of academics in early childhood, there is a renewed attention to play. A selection of New York Times articles represent some of these conversations and include interesting links to new resources.

- Taking Playtime Seriously (January 2018)
https://www.nytimes.com/2018/01/29/well/family/taking-playtime-seriously.html?module=inline

- In Britain's Playgrounds, "Bringing in Risk" to Build Resilience (March 2018)
https://www.nytimes.com/2018/03/10/world/europe/britain-playgrounds-risk.html

- Writing Prescriptions to Play Outdoors (July 2018)
https://www.nytimes.com/2018/07/16/well/writing-prescriptions-to-play-outdoors.html

- Let Kids Play (August 2018)
https://www.nytimes.com/2018/08/20/well/family/let-kids-play.html

- Children Must Be Left to Play (September 2018)
  https://www.nytimes.com/2018/09/09/opinion/letters/children-play.html
- How to Play Our Way to a Better Democracy (September 2018)
  https://www.nytimes.com/2018/09/01/opinion/sunday/democracy-play-mccain.html?rref=collection%2Ftimestopic%2FChildren%20and%20Youth

The Power of Play: A Pediatric Role in Enhancing Development in Young Children

http://pediatrics.aappublications.org/content/142/3/e20182058

In September 2018, the American Academy of Pediatrics published a report providing pediatric providers with the information they need to promote the benefits of play and to write a prescription for play at well visits. "At a time when early childhood programs are pressured to add more didactic components and less playful learning, pediatricians can play an important role in emphasizing the role of a balanced curriculum that includes the importance of playful learning for the promotion of healthy child development."

This report describes the known benefits of play for brain development and child development and learning, as well as other fundamental information for providers looking to advocate play-based early learning experiences with families, providers, and administrators. The report also discusses current issues such as the role of media and the stress on academic achievement in early childhood.

The State of Play in America: A Special Report by The Genius of Play

http://www.thegeniusofplay.org/App_Themes/tgop/pdfs/research/state-of-play.pdf

This report summarizes the contribution of several panelists who discuss the alarming disappearance of play in childhood, the ways in which play supports learning and development, and several current issues, such as achieving the balance between different kinds of play, the role of technology and play, and the role of parents in play.

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