

Supporting play—and learning—throughout early childhood

Tools for learning—the equipment, materials, and interactions we offer children—invite exploration, discovery, cooperation, manipulation, experimentation, mastery, imitation, and role-playing. The activity children perform with these tools is often called *play*.

We see the amount and complexity of play grow as children strive for independence and an increased understanding of themselves (*self-efficacy*), the world, and the people in it. Play is imaginative and symbolic (Piaget 1962). Whether one plays alone or with others, play engages all developmental domains, tickling the senses while building new ways of knowing. It is from play that we learn behavioral roles as well as the potentials and limitations of ourselves and others.

The materials and equipment we provide for children's play and how we create learning environments can either stimulate or depress children's skill development. Understanding the basics of child

development, developmental milestones, and the sequence of typical development provides broad guidance for appropriate classroom equipment and materials. For example, Lego™ bricks are tiny and would pose a choking hazard in a toddler classroom; further, toddlers don't have enough fine-motor control to connect the small parts successfully.

Going beyond the general guidelines, however, requires that we know the skills, interests, and needs of every child in a group of young learners. This child-specific knowledge makes equipping a classroom a bit more demanding and much more satisfying.

Some theories of play

Classical theories of play, proposed by John Comenius, John Locke, Jean-Jacques Rousseau, and Johann Pestalozzi in the 16th and 17th centuries, explored how children expressed their craving for knowledge through the manipulation of objects found in their environments. Friedrich Froebel, in the early 20th century, promoted the idea of nurturing play and connecting it to education or knowledge-building. Froebel, recognizing that knowledge is cumulative, built hands-on teaching materials that supported a deliberate early childhood pedagogy to include self-expression, creativity, social interaction, and motor expression.

From these origins, later 20th century researchers proposed a variety of theories on why and how children play, including the following:

- Surplus energy theory proposed that people have a certain amount of energy needed for survival. Because children are cared for by others and don't need to use their allotted energy, they use the excess in play.
- Relaxation and recreation theories suggested that play is essential to optimal brain function. Simply, these theories held that mental work drains the

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brain and relaxation rebuilds it.

- Practice theory suggested that children’s play offers practice for adult activities.
- Recapitulation theory relied on a controversial and discredited idea that all human history is replayed in a child’s development, from animal to savage and tribal.

In spite of current science-based evidence, some of these theories emerge in everyday early childhood practices. For example, a teacher says, “Too much energy is pent up after days of rain. We need outside time to use it up.” Or a teacher thinks, “Timmy is a wild child. He needs to outgrow his savage state and stop biting.”

Contemporary theories rely on the psychoanalytical work of Sigmund Freud and the psychosocial theories of Erik Erikson, cognitive theorists like Jean Piaget, the sociocultural theories of Lev Vygotsky, and Alan Leslie’s theory of mind. Today, brain-based research, reflecting advances in neurological imaging, supports many research studies that reinforce earlier play and learning principles.

Types of play

Children learn best in environments that encourage exploration and discovery without the adult distinction between work and play. For young children, play is intrinsically motivated; it’s an activity without product. The outcome isn’t as important as the process. Play is child-initiated (though sometimes adults need to teach children how to join a play scenario). It can be solitary or include large groups of children. It can include props or toys or be rooted only in the imaginations of children eager to pretend.

Mildred Parten (1932), an early play researcher, described children’s social interactions in play that are not developmentally dictated or hierarchical. Depending on circumstance (the environment, available props, and children’s temperaments, for example), children may engage in any of the types of play, although older children are more likely to engage in complex social play. All six types of play are equally valuable.

- Unoccupied play—An infant is engaging in sensory and motor activities—shaking a rattle, kicking feet. The child is exploring randomly, without organization, examining materials and objects, and observing how the world works (balls roll, blocks don’t, for example).

- Solitary or independent play—A child is playing alone, with or without toys or props, and is focusing on personal activities without interest in other children. This play invites children to explore and master lifelong skills including perseverance, tenacity, and determination.
- Onlooker play—A child is watching or talking with children engaged in a play script but doesn’t join the play. It may look like a child exploring an environment—haphazard, random, and unorganized—or like the child is unsure about how to join the play. But onlooker play is foundational for the other types of play because it offers time to observe the different ways of playing and learn social rules and relationships.
- Parallel play—A child is focusing on a single activity, playing alongside other children but maintaining independence. It is sometimes called *social coaction play*—the child is separate but close to other children, sometimes mimicking actions and scripts. It can look as though children are warming up to more engaging social interactions like moving from single-framed puzzles to a communal floor puzzle.
- Associative play—Children are engaging in similar activities with shared materials but working from unique scripts. The play action isn’t coordinated but the participants are interacting fluidly—the focus is on the other children, not the product. It is often the entry point to meaningful social interactions with other children, testing social skills and



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refining self-regulation.

- Cooperative play—Children are organizing themselves in play with specific roles, rules, and actions. It combines people with action. In early childhood settings, cooperative play is fraught with the potential for conflict. It requires a high level of social maturity or experience, organization and planning skill, and the ability to negotiate and problem-solve situations in which participants have different ideas about roles and rules.

In planning activities for children, we rely on three basics established in brain science research—children are born ready to learn, environments matter, and nurturing relationships are essential. We plan meaningful interactions accordingly. We recognize that that play is tied to learning across developmental domains—cognitive, social-emotional, physical, and language—and that this learning begins at birth. Further, we know that developmental domains do not operate in isolation; they are interconnected, one impacting and supporting the other.

Cognitive development. Experiences with people and materials build on the millions of *neurons* (brain cells) present at birth. Neural development is rapid and reinforced every time a child has a meaningful interaction—with color, a dog’s coat, faces, or a lullaby. Play is a dynamic tool for building and strengthening neurons as children observe, remember, experiment, and gradually synthesize experiences into what they know.

For example, an infant repeatedly drops a block from a highchair. By four months or so, the child knows to look down to find the dropped block. Eventually, after many repeats, the child accepts the physics law that gravity works—blocks don’t float overhead or cruise to a storage basket. Nor does anything else that’s dropped—peas, a doll, or a shoe.

Play helps children construct ideas and concepts. Through play these ideas are tested, reinforced, and expanded, or they fail and lead to new ideas. For example, Jenny and Miguel are building with blocks, successfully negotiating decisions about size, weight, and dimension. As Jenny adds a too-large block to the construction, it all tumbles down. Play is learning about arranging, sorting, classifying, and describing.

In preschoolers, emerging pretend play displays a form of symbolic thought. Nimbleness with symbols portends success with reading (letter symbols), math, music, writing, and even interpreting a map.

Language and dramatic play develop together as children learn to create and manipulate symbols.

All play enables children to

- imagine and execute activities;
- explore and manipulate concepts;
- test ideas;
- focus on tasks;
- plan strategy;
- practice, test, and evaluate skills;
- make connections among past experiences;
- practice sequential and chronological memory;
- think imaginatively; and
- represent objects and ideas symbolically.

Social-emotional development. Ann S.

Epstein (2009) holds that social and emotional development has four components:

- self-awareness and self-regulation—recognizing and managing emotions, making responsible decisions, solving problems constructively;
- relationship knowledge and understanding—identifying the self as unique and distinct, building the ability to know what someone else is thinking and feeling (theory of mind), and developing concern for others;
- social skills—building tools for harmonious interactions according to cultural and developmental norms; and
- social dispositions—developing pro-social cues and behaviors (a smile or grimace, for example) that communicate readiness to interact or cooperate.

Experience with people and materials—play—supports children’s emerging abilities to control their own bodies in space, to recognize that cooperation is less painful than aggression, to acknowledge that everyone has unique interests, needs, and expectations, and to realize that it takes practice to communicate, “I want to play with that puzzle too.”

Children’s play is an open field for testing rules—like the ones children devise in their play scripts, such as, “You be the dog, I’ll be the catcher.” Such rules are usually built on prior experiences.

Through play, preschool children enhance these social-emotional skills:

- developing friendships and trust;
- learning to take turns, share, and cooperate;
- listening to others and caring what they say;
- negotiating and resolving conflicts;
- learning the relationship between feelings and behavior;

- knowing that all behaviors have consequences;
- expressing feelings;
- acting out fear or anger in safety;
- modifying personal behavior to support group goals;
- understanding another person's point of view; and
- delaying gratification.

Physical development. Play contributes to muscle development—from the fine-motor skills necessary for an infant to hold a ball to the large-motor abilities that allow climbing, running, and pedaling. Strength, agility, coordination, balance, flexibility, and fluidity increase with experiences and challenges.

Play offers children the ability to

- practice small (fine) and large (gross) muscle skills;
- develop hand-eye coordination;
- develop spatial and distance awareness;
- practice flexibility; and
- negotiate and adjust physical space needs.

Language development. Language is a tool that allows people to share meaning—communicating ideas and needs, transmitting information, and reflecting on experiences and emotional states. In play, children engage in social interactions and have skill-building opportunities to communicate through gesture, facial expression and body language, dialogue (and debate), and eventually written words that have meaning. Pretend play is sustained through language—directing players to roles, costumes, and actions.

Preschool play helps children learn to

- express their ideas freely;
- tell and listen to stories and books;
- practice sequence and chronology;
- develop activity-specific language;
- use language for problem-solving and analysis;
- increase vocabulary;
- practice oral and written communication; and
- direct or respond to ideas and activities.

Fitting play to the developmental sequence

When infants and toddlers (birth to 18 months) aren't sleeping, they are playing—actively exploring their environments using as much information as their senses allow. Meaningful, face-to-face interactions between children and adults are the most important aspect of infant and toddler care.

In play with babies, plan a supportive environment rich in materials that stimulate the senses. For example:

- Talk, sing, hum, and make nonsense mouth noises to activate hearing and language imitation.
- Provide frequent and authentic cuddles, hugs, and smiles to reinforce attachment and security.
- Offer bright moving objects to encourage focus and physical coordination.
- Place mirrors at children's eye level to reinforce an emerging sense of self.
- Provide toys that make sounds in response to the baby's actions to stimulate hearing and introduce cause and effect.
- Offer objects to put into and dump out of containers to encourage experimentation, investigation, and physical self-control and coordination.
- Read to the babies—individually or in small groups.
- Use pretend activities like playing peek-a-boo, feeding a doll, pouring water, or eating toast and jam to support creativity, prosocial interactions, and muscle control.
- Provide safe places—both indoors and on the playground—for large-motor development.

Increased skill across all domains is clear in both play demands and scripts of preschoolers. Mere imitation is not enough; social interactions dominate but are often colored by unskilled attempts at impulse control, interpreting another's intention or need, and physical coordination.



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Preschooler play is done for its own sake. Yes, there is deep and important learning, but there is no goal or stated purpose. It is voluntary, spontaneous, quick to change (like transitioning from playing house to playing circus seamlessly), and creative.

By age 3, children begin to show a preference for specific playmates and the concept of friendship emerges—mutual regard. While fickle, young friendships offer companionship, affection, and increasingly complex interactions.

As preschoolers dive into the world of social relationships, they need responsive and attentive adults to model prosocial interactions, to spark curiosity, to teach negotiation and problem-solving techniques, and to maintain a safe environment that inspires exploration, investigation, and discovery.

In addition to maintaining aesthetically and cognitively rich learning centers, consider providing these active play supports.

- Provide time. Preschool children need experience and time to become engaged in sophisticated play scripts. A schedule that interrupts activities every 15 minutes (to introduce a new activity or center) undermines children’s meaningful learning through play. Instead, give children the time to develop mature play (as with every skill, practice is essential), to concentrate, and to build and sustain social interactions. Thirty minutes is minimum, 90 minutes optimum.
- Resist orchestrating play scripts. Provide time, space, and appropriate props and then step back to let the play evolve.
- Observe. Key in to individual children and their interests and needs. If, for instance, a child is eager to dig into art activities, offer support with extra time, different materials and tools, and the involvement of other children.
- Foster friendships. Avoid separating pairs of children, with the stated intention of broadening social experiences or minimizing exclusive giggling, secrets, or disruptive behaviors. Recognize friendships—and their transient nature.
- Offer open-ended experiences. Make materials available, resist differentiating nature and art supplies, and encourage experimentation and creativity. Know that you’re building *executive function*—the ability to plan, monitor, and adjust behaviors to the situation and goal—and strengthening motor skills and attention span.

- Select and rotate materials that reflect the culture of the classroom. Ensure accessibility of materials, and teach children appropriate clean-up and storage techniques.
- Learn about the role of a play tutor, leader, or guide who scaffolds children to a higher level of play. (See *From Play to Practice: Connecting Teachers’ Play to Children’s Learning*, referenced below.)
- Expect to wear many hats: props facilitator, guardian, peacemaker, matchmaker, storyteller, and scribe (Van Hoorn, Nourot, Scales, & Alward, 1999).

Choosing materials for play

Martha Bronson (1995) suggests grouping materials according to four types of play:

- Social and fantasy. These materials foster imagination and introduce symbols (as a doll represents a human child, or a unit block represents a smartphone).
- Exploration and mastery. These materials invite children to begin to understand the laws that govern the physical world (a square peg will not fit through the round hole).
- Music, art, and movement. These materials introduce and help refine artistic expression.
- Gross motor. These materials help build large-motor skills like balance, agility, flexibility, mobility, and strength.

This broad sweep of categories allows us to move away from the catalogs of blocks, glue, magnets, miniature people, books, brushes, and swings, for



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example, and into a deeper consideration of what children really need—and why.

Use the suggestions below to reintroduce or secure new materials for play. Add and rotate toys as children's interests and skills change.

Infants (birth to 12 months)

- Social and fantasy: materials that reinforce social features like faces and voices; wall mirrors; soft-bodied dolls; washable stuffed toys; hand puppets; transportation toys like one-piece vehicles
- Exploration and mastery: sensory and grasping toys like rattles, squeeze toys, keys on a ring, cloth balls; mobiles; construction materials like foam, rubber, or wood cubes; 2- to 3- piece puzzles; nesting and stacking toys; books that are washable and have realistic photographs or drawings
- Music, art, and movement: noisemakers like bells and music boxes; safe, soft space for physical exploration; pictures of real people and objects (including family members), large crayons and paper; rhythmic and soothing music from a smartphone or other device
- Gross motor: texture boxes and balls; push-and-pull toys; outdoor swings with mandated safety features; low, soft or padded platforms like a small, covered mattress or foam pad for climbing

Young toddlers (1-year-olds)

- Social and fantasy: mirrors including full-length and hand; dolls with washable soft bodies and simple accessories; washable stuffed toys and soft plastic animals; transportation toys including trains with 1 or 2 cars and simple coupling mechanisms (no tracks); simple kitchen sets with chairs and plastic food; simple dress-up clothes like skirts and vests
- Exploration and mastery: sand and water materials including simple floating objects, cups, funnels, scoops, and shovels; construction materials including soft and wooden blocks and plastic bricks; framed puzzles with 4 to 8 pieces; materials to sort by size, shape, color, or smell; materials with buttons, hooks, zippers, and snaps; simple picture books in addition to washable vinyl and board books; gather-and-dump materials
- Music, art, and movement: large crayons and paper and other art materials like large paintbrushes, finger paint, colored construction paper,

and chalk and chalkboard; rhythm instruments; music sources for dancing and action games

- Gross motor: stacking and nesting toys; pegboards with large pegs; push toys with and without long handles; doll carriages and wagons; large balls for kicking and throwing; ride-on vehicles (no pedals or steering mechanism); tunnels for crawling through; low, soft or padded climbing platforms; pounding and hammering toys; outdoor swings with mandated safety features

Older toddlers (2-year-olds)

- Social and fantasy: mirrors; washable, soft-bodied dolls with accessories and simple clothes; plastic or wooden peg people; role-playing materials like dress-up clothes, housekeeping equipment including brooms, stove, refrigerator, cooking equipment, and simple place settings; small hand puppets; transportation toys including cars, trains (no tracks), and trucks
- Exploration and mastery: sand and water materials including plastic or wooden people, animals and vehicles, nesting cups, funnels, scoops, and sponges; construction materials including unit blocks, Duplo® bricks, large nuts and bolts; framed puzzles with 6 to 12 pieces; pegboards and pegs, stacking color cubes; lacing materials including beads and string, lacing cards, and dressing frames; simple matching and lotto games; shape sorters
- Music, art, and movement: art materials including crayons, markers, chalk, paint and brushes, finger



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paint, mural paper, blunt-ended scissors (both right- and left-handed), play dough, and easel; rhythm instruments to shake, bang, or clap; music sources for dancing and action games

- Gross motor: push-and-pull toys including wagons, carriages, and shopping carts; balls for throwing, bouncing, rolling and kicking; ride-on toys including small tricycles (with 10-inch wheels); outdoor swings with mandated safety features; low climbing structures and slides (with mandated fall zone features)

Preschoolers (3 to 5 years)

- Social and fantasy: mirrors; washable vinyl dolls with accessories and clothing; role-playing materials including culturally relevant dress-up clothes, role-relevant work life props, housekeeping equipment, and doll equipment like highchair and carriage; small puppets and theater; wood or vinyl animals including zoo, farm, and pets; props for play scenes like traffic signs, vehicles, and small people and animal figures; transportation toys including vehicles to use with unit blocks, trucks, trains, airplanes, and boats; gauzy fabric lengths
- Exploration and mastery: sand and water materials including plastic tubes, eyedroppers, water pumps, and sand molds; construction materials including unit blocks, hollow blocks, Lego® bricks, interlocking forms, and plastic push-together blocks; puzzles including framed puzzles (up to 30 pieces), floor puzzles, and number and letter foam puzzles; materials for fine-motor development including pegboards and pegs, colored cubes, magnet boards, bead and string activities with patterns, mosaic blocks, flannel boards, lacing cards, simple sewing cards, and basic frame loom; loose parts (see references); games including dominoes, lotto, color or picture bingo, concentration games, and simple board games; matching, sorting, and ordering materials, measuring tools like scales and graded cups, science materials like prisms and magnifiers, live animal and plants to care for; simple mechanical devices like gears and levers; books with visual detail, more words, and new vocabulary including nonsense and realistic stories and songs and illustrations that draw associations between real, possible, and pretend
- Music, art, and movement: art materials adding round-ended scissors (both right- and left-handed),

clay with modeling tools, play doughs and shaping tools, glue and paste, collage materials, print-making tools, watercolor paint, hand craft tools for sewing, weaving, and knitting; workbench with simple (but functional) tools including hammer, clamp, goggles, and hardware; rhythm instruments; recorded music for dancing, singing, and action games; recorded read-along stories

- Gross motor: wagons, wheelbarrows, scooters, tricycles and other pedal toys; balls, adding hollow plastic balls and bats, cabbage balls (softer than softballs), and small basketballs and hoops; jump ropes; flying disks like Frisbees™; targets and beanbags; swings, slides, ropes, hanging bars, and outdoor climbers (with mandated fall zone features); lumber scraps and tree trunk sections (6-inches deep) for adventure play constructions; parachutes

Make all the materials in your classroom appealing and interesting, safe, appropriate to the children's developmental levels, and suited to use in groups of children. Further, heed the guidelines established by the U.S. Consumer Product Safety Commission. These regulations address durability, safety, design, construction, and labelling.

Valuing play

As we consider the values of play, it's useful to examine our practices through the lens of universal values—what we want for all children—including the following:

- A sense of respect, pride, and empathy: We want children to have regard for the inherent worth of every human being, including themselves.
- Acceptance of responsibility and self-reliance: We want children to have a sense of obligation to care for each other and for themselves.
- Honesty: We want children to be honest with themselves—to have integrity—and others.
- Fairness: We want children to act in an unbiased manner, to deal with others equitably, to develop a fair and objective attitude toward others, and to follow the golden rule.
- Strength to act with determination, perseverance, and loyalty: We want children to develop the ability to hold on to their beliefs and to achieve their goals.
- Self-regulation and independence: We want children to learn to exercise personal competence.

- Tools for cooperation: We want children to succeed at combining their energies to work toward a common good.
- Courage: We want children to be equipped to face difficulties and challenges while maintaining control and focus.
- Authenticity: We want children to be able to evaluate their own strengths and weaknesses to enable honest evaluations of struggles and challenges. Play invites children try on these values. It lets children explore making decisions, taking charge, solving problems, and choosing to be fair, brave, and wise. It invites children to
 - investigate power and autonomy—imitating and exploring villain, hero, baby, clown, monster, trickster, and ruler roles—both real or fanciful, with magical props and costumes;
 - balance the desire for power with the need for friendship—compromise, negotiation, order, problem solving—and discovering or learning the difference between assertive and aggressive behaviors;
 - test physical limits—twirl, jump, kick, roll, tackle;
 - explore feelings—fear and anxiety (about monsters, fire, illness, or bombs) as well as hope, passion, wonder, and bravery (like being a super friend, having a pocketful of magic seeds, being selected for the rescue patrol, or having a unicorn horn); and
 - ask *big* questions that touch on morality—determining right and wrong, being alive or dead, distinguishing real and fantasy, and identifying good and bad.

The bottom line: Play helps build a framework for learning and skill development across all domains. It gives children, and groups of children, support for integrating cultural, societal, and personal characteristics including interests, skills, and goals. Through play, we can offer children ways to investigate and establish

- physical, emotional, and psychological security;
- themselves as independent and unique individuals;
- a sense of respect, acceptance, and recognition—a meaningful place in a learning community;
- the freedom to grow—to experience wonder, satisfaction, and inner peace;
- self-responsibility and self-efficacy with authority, the opportunity for choice, and control;
- ritual, self-regulation, and order; and
- creativity through self-expression, social communication, and the awareness of possibility.

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Recommended reading

Paley, V. G. (1992). *You can't say you can't play*. Harvard University Press.

Paley describes her attempt to undo the habit of exclusion—when certain children are consistently rejected from play groups—in her classroom of young children.

This, and all of Paley's books, offer important insights into the nature of children and their play. ■