Community Investment Collaborative for Kids

Resource Guide 4

LISC CICK Community Investment Collaborative for Kids

1 Developing Early Childhood Facilities

2 Designing Early Childhood Facilities

3 Equipping and Furnishing Early Childhood Facilities

Creating Playgrounds for Early Childhood Facilities

Community Investment Collaborative for Kids

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Community Investment Collaborative for Kids

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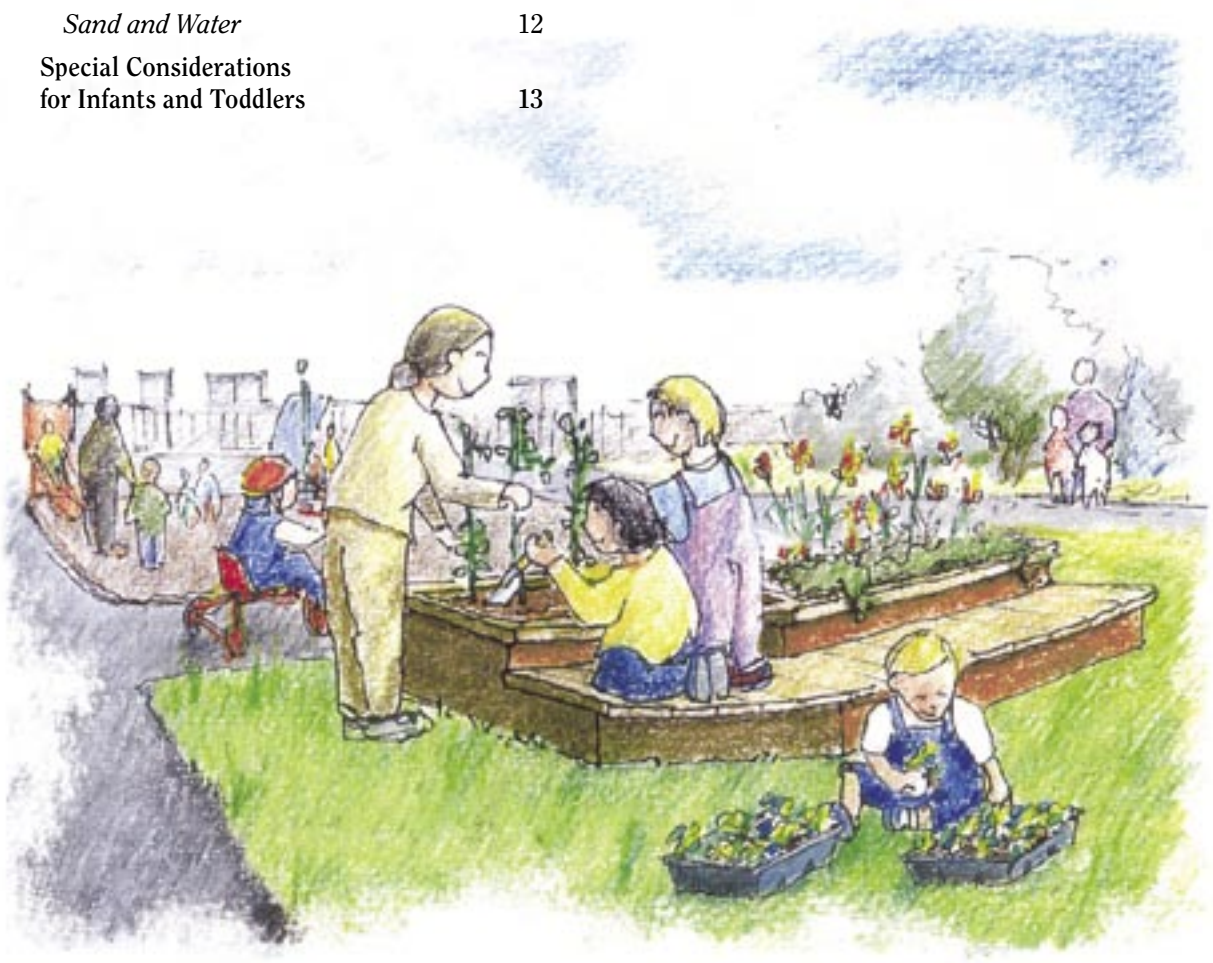
Contents



"Rather than beginning with catalogs and decisions about equipment and surfaces, start with what it is that children should be able to do outside, if only we could make it happen. Then decide how best to accomplish this."

Quoted from "Are We Losing Ground?" by Jim Greenman as printed in Child Care Information Exchange; March, 2003.

Introduction

Active outdoor play is an important part of a child's day, so planning outdoor space and memorable outdoor activities are essential components of developmentally appropriate care. Vigorous physical play offers children a chance to spend time together in ways that are quite different from their play indoors. It offers children an opportunity to test their physical skills and abilities. It builds strength and coordination, and stimulates the imagination as children engage in fantasy play or interact with natural materials and the scents, sounds and textures of the outdoors.

The change of pace is important as well. Outdoor voices and laughter can be more exuberant; play can be louder and sillier; and children are encouraged to run, climb and jump instead of discouraged from doing so. The change of scenery can be equally valuable. Outdoors there are opportunities to mess about and explore materials in new ways. Exposure to sunshine, shade and the elements helps children learn more about their world.

This guide will help you plan your center's outdoor play space to achieve a successful environment for young children. It will begin by considering the types of activities that children can enjoy outdoors, and will suggest equipment and materials that support that play.

REGULATIONS AND GUIDELINES

First and foremost in considering your playground, make sure that you become familiar with which regulations govern playground design and use. Ideally your playground project should be pursued in conjunction with an architect who is familiar with child care design and local regulations. The architect will then be responsible for ensuring that the playground meets all required regulatory standards and building codes. If you are not working with an architect on design, it will be your responsibility to obtain copies of all applicable codes and regulations, speak with any relevant officials, such as state fire marshals, and ensure that your proposed design is in keeping with all relevant standards.

In addition to understanding state child care licensing regulations for outdoor playgrounds, you must also become familiar with any state or local fire or building codes that relate to how you design and equip your playground space. Also, if you are aspiring to achieve accreditation for your center through the National Association for the Education of Young Children (NAEYC) make sure that you understand the guidelines set out in those standards for children's outdoor play areas.

At the end of this guide you will find a list of national organizations with guidelines governing the development of children's playgrounds and playground safety. Please note in particular the U.S. Consumer Product Safety Commission's **Handbook for Public Safety**. It is also important to become familiar with the new rules regarding play areas for special needs children developed by the Americans with Disabilities Act.

! *Across the country, there is growing concern about childhood obesity. By the time American children enter public school, 15% of them are classified as obese. Since many patterns of activity are established in early childhood, child care programs play a critical role in establishing active habits and offering age-appropriate physical challenges that support healthy growth and development.*

CHILDREN'S GROSS MOTOR DEVELOPMENT

Too often, the model for an early childhood playground is a scaled-down version of an exciting playground for school-aged children. Preschoolers are not just smaller than older children – their physical skills, spatial orientation, judgment, and how they interact with their surroundings are all significantly different. The layout of a play area – including sight lines, interest areas and equipment choices – should be based on the ages and stages of the children who will use it, and always include appropriate safeguards.

A summary of milestones in children's gross motor development is below, along with playground equipment ideas for each stage. While each child develops in an individual way, these guidelines can help in assessing the suitability of outdoor equipment and activities for children of different ages:

AGE	DEVELOPMENTAL MILESTONES	RECOMMENDED EQUIPMENT
INFANTS (0-15 MONTHS)	▪ Develop on individual timetables ▪ Push and pull up ▪ Sit without support ▪ Crawl ▪ Cruise or walk using objects or adults for support ▪ Begin to stand and walk alone	▪ Soft surfaces ▪ Shade ▪ Tactile materials ▪ Water and sand ▪ Objects to crawl through ▪ Places to sit with adults ▪ Wind chimes and other sensory materials ▪ Safe plants to smell and touch ▪ Toys to push and pull ▪ Sturdy equipment to pull up on
TODDLERS (15-33 MONTHS)	▪ Become increasingly mobile ▪ Push and pull toys while walking ▪ Learn to climb stairs ▪ Begin to use riding toys (with feet on ground) ▪ Run short distances ▪ Squat and balance on feet while playing ▪ Kick and throw balls ▪ Jump in place	▪ Climbing structures ▪ Slides ▪ Water and sand play equipment ▪ Places to crawl through, over, under ▪ Riding toys ▪ Sensory materials to engage sight, sound, touch, taste ▪ Structures (like playhouses) for make-believe ▪ Shady places to sit ▪ Loose parts for creative and imaginative play ▪ Places to run, throw balls, play

AGE	DEVELOPMENTAL MILESTONES	RECOMMENDED EQUIPMENT
YOUNG PRESCHOOL (2.9-4 YEARS)	■ Highest activity level of any age in the human life span ■ Increasingly more adventuresome ■ Run back and forth ■ Throw and catch balls ■ Pedal a tricycle ■ Somersault ■ Climb stairs ■ Push and pull larger toys like a wagon ■ Enjoy showing off climbing prowess ■ Hop and jump increasingly well	■ Structures for climbing and sliding ■ Riding toys and paths to ride on ■ Balance beams ■ Playhouses ■ Water and sand play equipment ■ Loose parts for pretending, creating, building ■ Talk tubes ■ Telescopes ■ Places to run, jump, play ball ■ Materials to enhance all senses (wind chimes for sound, flowers for smell) ■ Shade to sit, eat, read, relax ■ Places to paint, draw and create
OLDER PRESCHOOL (4-5 YEARS)	■ Physically competent ■ Climb well, enjoy trying to go higher and higher ■ Enjoy challenges ■ Roll balls ■ Skip on alternating feet ■ Able to begin riding two-wheel bike	■ Climbing and sliding structures that provide challenge for increasing skills ■ Bikes and paths to ride on and explore ■ Water and sand play equipment ■ Art studios ■ Structures for imaginative play ■ Loose parts to enhance play ■ Natural features to experience seasons ■ Places to run, play ball, play games

ORGANIZING THE SPACE

If you think about the outdoor play space as an extension of the indoor learning environment, it is natural to consider different **zones and activity areas** as you plan the space.

1. **Plan separate zones** for quiet activities and active play; large group as well as individual or small group play; and play equipment. Make sure that activities that are adjacent to each other are compatible – keeping in mind that the most active zones should be grouped together and away from the quiet zones. If your center is part of a housing complex, school, retail center or office building, you might also consider locating the most active (and often noisiest) play zones at some distance from your neighbors' windows.

To plan out your zones and to help determine where to locate equipment and other structures, consider the following:

- **Environmental features:** *Note the overall shape of the space and its topography, and in particular any existing natural features like trees, shrubs, rocks, or sloping areas you may want to incorporate into your plans – like putting a seating area around the base of a tree or building a slide into a small hill. Also, there may be some interesting views or landmarks you want to highlight through the placement of equipment or location of activities.*

- **Sun patterns:** *Don't forget to look at sunlight and shade patterns at different times of the day and year to help figure out where you may need to place a shade structure or where it might be best to plant a garden.*

- **Safety hazards:** *Make sure you are aware of any potential safety hazards*

such as the presence of underground or overhead utilities or wiring, or sharp or protruding edges on the building.

- **Points of Access:** *Note the location of doors to the outdoor area from the classrooms and/or other entry points onto the playground, and determine emergency access and egress routes or delivery routes if supplies are moved through the play area. Keep in mind how these access points can interfere with the flow of playground activities or present a security issue.*

2. In order to maximize children's play experience and ensure their safety around play structures, be sure to **plan for appropriate circulation routes or pathways around the play space.** Avoid laying out long straight paths in favor of shorter more carefully planned paths of varying widths. These pathways should provide a clear route around the play area, ensuring that children do not interfere with each other's play or encroach on the safety zones around large equipment.

3. **Plan for seating for children and adults** in various areas outdoors. Use benches, tree stumps, picnic tables or other types of seating. Provide old quilts or blankets for picnics and story time. Provide children with several places to sit and watch the action.

4. **Plan for convenient storage of outdoor toys and equipment.** Storage should be secure and weatherproof, and organized for different types of equipment. Depending on what types of equipment and materials your center needs to store, several smaller point-of-use storage units may work better than a single large storage shed that becomes a jumble of sand toys, swing parts, vehicles and other toys.

   One goal for the play area is to provide a range of interesting materials for children's use. These materials – often called "loose parts"

(see box on "What Are Loose Parts?") – require accessible storage near the areas where children will use them.

Gardening catalogs, garden centers and "big box" hardware stores may be better sources of affordable and adaptable outdoor storage than early childhood or playground catalogs. Depending on aesthetic and budget considerations, you can find bins of all sizes, storage benches, standing racks with canvas pockets, and storage sheds of plastic, metal or wood. If purchasing wooden storage units, be sure that they are made of cedar or another weather-resistant wood. A particular challenge can be tricycles and other riding toys, which may be best stored in their own "garage," since they are bulky, heavy and cumbersome.

5. **Plan for inclusion for a broad range of disabilities**, including visual, hearing, developmental, social-emotional as well as physical. Manufacturers are able to adapt the design of play equipment to meet accessibility guidelines, so with careful planning you can design a play space that supports children of all abilities. The slope of paths and ramps require attention and each activity should be evaluated to see how it could be adapted to be barrier-free.

WHAT ARE LOOSE PARTS?

Loose parts are materials that can be added and rotated daily, weekly or monthly to enhance children's outdoor play. The term describes any assortment of found objects, toys and natural materials that children can move and manipulate during their play. The display and storage of loose parts around the play area is key to stimulating creative play. Teachers should regularly assess the materials for sharp edges or hazards and replenish as materials get used up or worn out. Examples of loose parts include:

- Sand toys (buckets, shovels, sifters, garden tools, plastic figures)
- Natural materials such as small pieces of wood, pinecones, seashells, smooth stones, and seed pods
- Imaginative props such as costume jewelry, artificial flowers, rubber snakes and bugs, pieces of fabric, dishes, cups and utensils, wood scraps and duct tape
- Spray bottles, hoses, sprinkler, large bubble wands
- Milk crates and plastic bins
- Child-size wheelbarrows
- Magnifying glasses
- Hoops, balls, traffic cones
- Art supplies including paper, chalk, paint

6. **Plan for safety and supervision.** Use the resources of the National Program for Playground Safety and the US Consumer Product Safety Commission, listed under Resources. An understanding of children's developmental milestones for different age groups will guide your planning and help you to avoid creating hazardous conditions by expecting children to use equipment that is too large or complex for their abilities. At the same time, remember that children will use play equipment and materials in unexpected ways, so make sure there are good sight lines from all locations in the playground. In general, when planning your playground design make sure that the equipment and other activities that are selected are consistent with the supervision you are able to provide. For example, if two adults will be on the playground with 20 children, it probably does not make sense to offer equipment or activities which will require one adult to be continuously stationed next to a single piece of equipment or with one specific activity.

7. **Provide developmentally appropriate challenges.** While safety must always be a key consideration in planning a child care playground, make sure that it doesn't override the need to provide appropriately challenging experiences for young children. Preschool children, in particular, are becoming physically competent and seek out opportunities to show off skills such as their new climbing prowess. Make certain the equipment and activities you provide will give them appropriate opportunities to challenge their skill level; otherwise, they are likely to seek out inappropriate ways to do so.

8. **Plan for access to drinking water, hand-washing and children's toilets.** If you are designing a new space, consider including an outdoor bathroom. The cost is minimal if factored in to new construction, and it will be well worth it to eliminate extra trips in and out of the building with small groups of children for bathroom time. If it is not feasible to include an outdoor bathroom in your plans, consider placement of the indoor bathrooms and sinks in relationship to the outdoors in an effort to minimize the duration of trips in and out of the building. Finally, if your space does not allow for either of these possibilities, at least be sure to bring drinking water out to the playground and to have either a bucket or hose for children to rinse off dirty hands.

Creating a Natural Playscape

In the early childhood field, there is growing interest in moving away from playgrounds that emphasize manufactured equipment and play structures to the exclusion of other activities. Greater attention is being given to the use of landscaping and custom built structures to create a more unique and multi-purpose outdoor environment. Some of the interest is budget-driven because of the expense of manufactured equipment, safety surfacing and installation, but an equally compelling interest is philosophical.

Natural playscapes are designed to include varied activities that evoke the unstructured and creative experiences of outdoor play from an earlier time. These play areas are built on topography that may offer things such as small hills and mounds. They may include grass and sand, mud and water, trees, shrubs and gardens. Even in urban environments, you can find ways to bring in natural elements – perhaps by planting container gardens, developing raised bed plantings, varying surfaces and ground textures throughout the space, and incorporating sand, water and other tactile experiences into the outdoor area. Natural features can even be utilized for playground security. Instead of using very high fences to protect playgrounds, consider adding lower but deeper fencing, or planting child-friendly materials on the inside and thorny, dense plants on the exterior to provide a natural barrier. Natural playscapes offer children opportunities to explore and develop their own play world using natural surroundings and the loose parts that teachers organize and display around the play area. These spaces are designed to change and evolve with the seasons and with the interests of the children. Most do include manufactured play equipment, but it is incorporated into a larger design and is not the only focus of the play space.

Developmentally appropriate manufactured play equipment can be a critical component of children's outdoor play spaces, but incorporating more natural elements can help stretch the budget and significantly enhance children's experiences.

While natural playscapes have endless advantages, it is important to note that they do require a substantial commitment to ongoing maintenance and upkeep.

ESTABLISHING OUTDOOR ACTIVITY AREAS

An outdoor play space should be divided into distinct activity areas, both to ensure safety and to provide suitable locations for different types of play. Provide both sunny and shaded places, and a covered area so that children can get outdoors on rainy days or in the heat of a summer day.

Most state licensing regulations require a minimum of 75 square feet of outdoor space per child playing outdoors at one time, but early childhood experts recommend 100 square feet or more. The space should be enclosed with a non-climbable fence at least four feet high (and even higher where security is an issue) and gates should have self-closing mechanisms with locks that children can't operate.

The ground surface in the play space should vary according to activity. For play structures, it's critical to plan and professionally install a safety surface designed for the height of the equipment (safety surfacing will be addressed in greater

Highly successful natural playscape projects will best be accomplished by securing the services of an architect or landscape architect with experience designing this type of space.

detail later in this guide). The leading cause of playground injury is falls, and every year children are killed or seriously injured in falls from play equipment. Other surfaces for play include sand, grass, dirt for gardening and digging and a surface for riding toys. Some programs in urban areas may choose artificial grass because it is easier to maintain than real grass, which gets worn out in high use areas and needs periodic re-seeding, mowing, and watering. If you are constructing a playground, get professional advice on drainage, try to shape the ground to create some higher areas, preserve or plant trees, and introduce natural elements like shrubs, large logs or boulders.

The following is a list of important play structures and playground equipment, with guidance on how to incorporate them within your playground's varied activity areas:

CLIMBING STRUCTURES

Children love to climb and if appropriate opportunities are not available, they will find other, potentially harrowing ways to test their developing abilities. Every climbing structure should offer two ways up and down and one way should offer steps with a handrail – since children's ability to climb up develops before they can safely climb down. If you plan to include a piece of large play equipment, pay attention to the height of platforms, the ways children can get onto and off of the equipment, and to the various special features that make the equipment interesting.

- **Platform height:** *The maximum platform height for infants and toddlers should be 24 inches, and for preschoolers, 36 to 48 inches, with protective enclosures to prevent falls.*

Calculate the maximum height for the fall zone at the highest point on the structure, which may be the roof, and provide an appropriate safety surface.

- **Access to the structure:** *Steps, ramps or ladders that lead into or onto the structure should end at a platform that can contain more than one child. Structures for infants and toddlers should have ramps and low steps. While 3-year-olds can use steps and step ladders, 4- and 5-year-olds can use more complex climbing methods, such as netting or poles. For children 3 and younger, all access routes should include handrails.*

- **Level of challenge:** *When deciding on how challenging a large climbing structure should be, consider the ages of children using the structure, the availability of staff to provide hands-on spotting for children using the equipment, and common sense. For example, children in New England wear stiff winter boots outdoors as much as four to five months of the year and may find complicated play components hard to navigate without flexible sneakers. Some programs restrict the use of the most challenging components to 4- and 5-year-olds.*

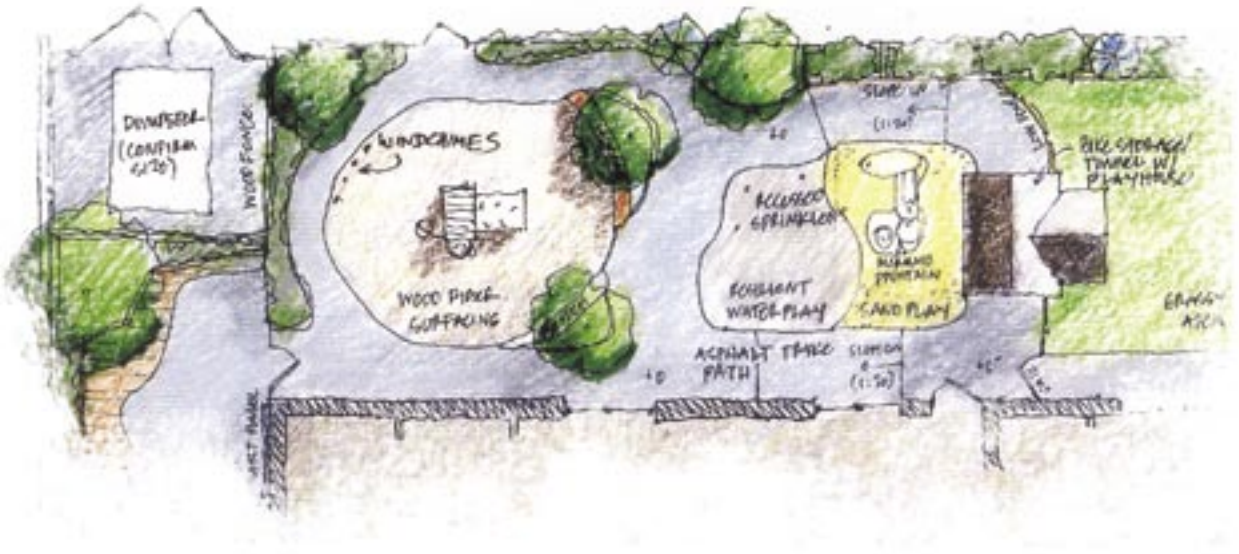
- **Play value:** *Many structures offer an array of panels to attach or incorporate into the structure. In making decisions about whether or which panels to include, look for those that enhance the play value of the structure. Bubble windows, crawl through panels, steering wheels, and mirror panels will engage children and inspire imaginative play by offering a variety of activities and uses, and opportunities for children to interact with one another. Features such as smiley faces, dinosaur panels, alphabet cutouts, spinning tic-tac-toe games and other things which only have one use or purpose, may have limited lasting appeal.*

FALL ZONES AND SAFETY SURFACES

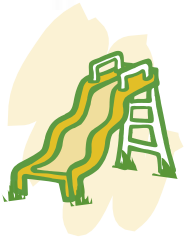
Children haven't yet learned the limits of their own physical abilities. They can't judge heights or distances with accuracy. Their heads are large and heavy in proportion to their bodies, so they fall. Therefore the area underneath and around outdoor play equipment – known as the "fall zone" – must have an appropriate cushioned surface to reduce injuries from falls.

The Safe Playground Handbook, available from the National Program for Playground Safety, provides guidelines on appropriate fall zones and options for safety surfaces. This handbook recommends a safety surface of a *minimum* of six feet extending in every direction around the equipment. Depending on the type and height of equipment, the fall zone may need to extend out even further.

The type of surfacing material you choose for the fall zone will depend on how you design your play area, the equipment you choose, and the age of the children using the structures. There is a variety of surfacing materials available, including both loose fill and unitary synthetic products. There is no one right answer as to which surfacing is best, however, there are some surfacing materials that should never be used for equipment fall zones: asphalt, concrete, dirt and artificial grass. The decision on which surfacing to use will depend on a number of specific factors, including cost, aesthetics, compliance with accessibility regulations, ongoing maintenance and replacement costs, installation requirements, flammability, needs of the children using the equipment, and other considerations specific to your site and playground plan.



SURFACING MATERIAL	PROS	CONS
ORGANIC LOOSE FILL *(wood chips, bark mulch, engineered wood fiber)*	■ Low cost ■ Easy installation ■ Good drainage	■ Will compress and need to be monitored for correct depth ■ Can be flammable ■ Requires some type of barrier to contain the material ■ Likely to end up spread around the playground ■ Not ADA approved
SAND	■ Low cost ■ Easy installation	■ Attractive to bugs and animals ■ Hard to keep contained within fall zone/ needs lots of sweeping and raking ■ Slippery on surfaces outside of fall zone ■ Not ADA approved
PEA STONE	■ Low cost	■ Often thrown by children/can be dangerous ■ Children may place small stones in ears, nose, etc. ■ Requires ongoing maintenance ■ Not ADA approved
SHREDDED RUBBER	■ ADA approved ■ Lower cost than other synthetic materials ■ Easy installation	■ Will compress and need to be monitored for correct depth ■ Reports of black rubbing off on children's clothes, hands, etc.
SYNTHETIC UNITARY *(rubber mats or tiles, pour-in-place surfaces)*	■ ADA approved ■ Provides permanent sufacing solution ■ Very low maintenance ■ High level of safety	■ High cost ■ More complex installation



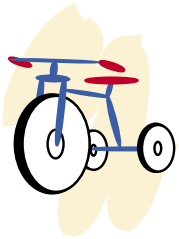
SLIDES

A slide may be a component on a larger climbing structure or it may be a separate stand-alone piece of equipment. In more natural playscapes you may see slides actually built in to sloping hills. For infants and toddlers, slides should be quite low with a gradual slope. For preschoolers, the top of the slide should be no higher than six feet. All slides for all age groups will require a safety surface. Even if the slide is a freestanding piece of equipment, there should be a platform at the top of the ladder that gives a cautious child the chance to position himself on the slide and to work up the courage to slide down. Look for slides with high sides at the top that offer better protection at the critical transition point between climbing up and sliding. Consider also:

- *Flat steps or ladder rungs are safer for 3-year-olds than rounded rungs.*
- *Very high or long spiral slides are not appropriate for children under 5 years old.*
- *Slides with sides of 2 1/2 inches or higher and a flat bottom are best for preschoolers.*
- *Metal slides should be avoided since they can quickly heat up to a point that will burn an unsuspecting child on a warm, sunny day.*
- *Two parallel slides double the fun without greatly increasing cost and are often components on a climbing structure.*

SWINGS

Swinging is a favorite activity for young children. If you choose to use swings on the playground they should not be incorporated into a climbing structure – instead they should be positioned on the periphery of the space with clear boundaries that alert children that they have entered the swing zone. Those boundaries may be plantings, a level change, or a low barrier. At a minimum, swings should be nine feet from any other equipment. Limit the number of swings to two or three and space them at least 1 1/2 feet apart. In an early childhood playground, swings should be made of canvas or soft rubber and for safety purposes, the standard S-hooks should be replaced with another fastener at the point where the chain meets the seat. Infants should have bucket style seats that fully encircle their bodies; toddlers should use a swing with back support and a safety belt. Other swing options, especially for limited space or budgets, might be tire swings on a swivel fastener, or plastic and rubber bouncing swings. Most swings require professional installation and all require a safety surface over a large area. Even a very small swing zone will require approximately 20 x 30 feet. Given the significant amount of space required for swings, potential safety risks, and intense supervision required, many centers are now choosing not to use them.

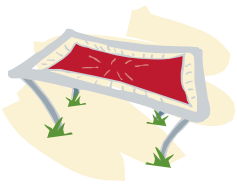


RIDING TOYS

Provide several wheeled vehicles for each age group. Ideal riding toys for toddlers are small and foot-propelled with a wooden seat for the child to straddle, four wheels and a simple steering mechanism. For preschool children, it makes sense to invest in high quality steel tricycles and other vehicles. Look for wheels without spokes or fenders, solid rubber tires, and ones that have replacement parts available, since these vehicles will cost between $125 and $300 apiece. Protect them from weather and maintain them and they will last for many years. The best-known manufacturers are Angeles, whose products are sold in many early childhood catalogs, and Community Playthings, which has its own catalog. Several catalogs also sell riding toys from a Danish company called Winther that makes some interesting new vehicles, and offers adaptive accessories to make their riding toys accessible for children with disabilities.

Purchase vehicles that require different skill levels so that children can find one to suit their abilities. Facilitate cooperative play with vehicles that carry more than one child. Require the use of bike helmets and provide a clearly delineated, though not straight, path for riding toys, away from quieter activities.

A great multi-use option for riding toys and storage is a storage shed which opens on both sides allowing children to ride through it as a tunnel when not in use for storing the riding vehicles, as pictured on the opposite page.

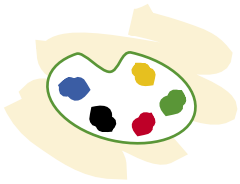


BOUNCING AND BALANCING

Small trampolines and balancing apparatus need close supervision but are very popular with children. Balance beams can be purchased through catalogs, but can also easily be built on site with landscape timbers, bricks, boulders, or lumber rounds (see illustration page 2).

DRAMATIC PLAY

A wooden playhouse open on one end can turn into a store, fort, rocket ship or other location for pretend play, but can also be a stage for outdoor performances. Some manufacturers offer playhouses made to look like log cabins, barns, castles or cottages. Resist them and buy or build a sturdy, simple structure that allows children to develop changing identities for the structure. They will create a much richer fantasy using their own imaginations and loose parts from the play area. Putting the structure near the sand and water play area will further enhance the range of activities that children devise. An old rowboat or canoe set in sand, outdoor furniture, wooden boxes, milk crates, and boards will help extend the play.



ART

Outdoor art can offer great opportunities for children to engage in very messy activities that might not be ideal indoors. An area set aside for art is best located near running water, allowing for easy clean-up of the area. Offer art on both horizontal and vertical surfaces – a picnic table covered in plastic is a great space for drawing and creating, chalk on concrete or brick walls will wash away with the rain, painting with water on buildings will allow imaginations to run wild, and outdoor easels, either self standing or mounted on fences or walls, provide opportunities for many types of creative art (see illustration page 4). Outdoor art can also incorporate mud, leaves, sticks, and found objects as well as traditional paints, crayons and markers.

GAMES

Provide an area for running and circle games, games involving throwing or hitting balls, and games with rules. It should be well away from swings and the landing zone for the slide.

GARDENING AND NATURE

The garden area can be as simple as a few large pots filled with soil or a garden plot laid out in the yard. Raised beds generally ensure better and safer soil quality. Gardens need a convenient source of water and sunlight five or six hours per day. If no area has that amount of sunlight, large lightweight plastic pots on movable wooden pot caddies can be moved mid-day to get more sunlight. Place bird feeders, a birdhouse and wind chimes nearby. If you garden in pots, plastic shovels, hand rakes and scoops will be adequate tools, but if you have a garden plot, look for good quality children's garden tools, which can be purchased at specialty toy stores or on the Internet as well as at some local garden centers.

SAND AND WATER

Outdoor sand and water play can be much more elaborate and engaging than indoor play. The areas should be located close to each other because the introduction of water allows children to work with both wet and dry sand. It is important to note that sand as a safety surface underneath play equipment cannot double as the sand play area. The sand play area should have a cover to keep the sand clean from animal waste. Include lots of interesting toys for children to use in conjunction with sand play. Think beyond the traditional pails and shovels to incorporate items that will allow children's imaginations to come into play, such as funnels and sifters, tubes, dump trucks, toy people and animals, etc.

Water play is a source of fascination for children of every age. It's soothing and fun, and a well-designed water play area engages them for long periods. Offer opportunities to control the flow of water with locks, faucets, and valves, to use soft and harder spray, to direct a flow of water through a water wheel or a series of pipes or tubes. Offer objects to float, and others to measure and pour. If you have enough room, a spray fountain or built in sprinklers for cooling off in summer may be preferable to use of wading pools which raise health concerns because of standing water and require intense daily cleaning.

If you have limited space for sand and water play, you may decide to use a standing sand and water center. Some are quite elaborate and offer chutes, funnels and many more features than indoor sand or water tables. Many of the more elaborate standing water tables require permanent installation, but portable tables are available as well.

SPECIAL CONSIDERATIONS FOR INFANTS & TODDLERS

Infants and toddlers should have their own self-contained outdoor play area, protected from older children and designed with challenges and comfort tailored to their needs.

Their play areas should include:

- *Places for eating or just relaxing outdoors in the shade*
- *Convenient access to diapering area and hand-washing*
- *Safe spots for crawling, such as grass, a unitary safety surface or vinyl or wood composite decking, such as Trex*
- *Sturdy ledges or railings at a height of 14-16 inches for babies pulling up to stand*
- *A non-metal slide with a gentle slope accessed by a low climbing ramp with steps and a handrail*
- *Bucket swings at a safe distance from other play*
- *Short tunnels and peek-a-boo places*
- *Seating at various levels*
- *Rocking toys that children can sit inside*
- *Pushing or riding wheeled toys*
- *Safe water and sand play with simple props*

Considerations in Selecting Equipment

Few early childhood professionals have an opportunity to plan more than one new outdoor play area in their career. In most cases, they maintain, upgrade, and gradually shape an existing outdoor environment to make it consistent with their values and the range of experiences they want to offer the children in their program. However, when offered the chance to modify or replace a playground, there are some important guidelines.

GET PROFESSIONAL ADVICE

If done well, your playground will be a major investment. You will be well served by expert help from a professional architect or designer with experience in planning children's playgrounds. Ideally this should not be an individual with other motivations, such as an interest in selling you their equipment and products.

HEALTH AND SAFETY

Collect information on all of the relevant regulations and safeguards, including:

a. *State licensing regulations*

b. *The US Consumer Product Safety Commission (CPSC), which sets national standards for play equipment*

c. *The American Society for Testing and Materials (ASTM), which sets voluntary compliance standards for play equipment and safety surfaces*

d. *The International Play Equipment Manufacturers Association (IPEMA), which certifies compliance with ASTM regulations*

All of these organizations are listed in the Appendix.

Use the resources of the National Program for Playground Safety (NPPS), a non-profit organization at the University of Northern Iowa. NPPS publishes the *Safe Playground Handbook* and maintains a website that can be found at www.playgroundsafety.org.

General health and safety guidelines include the following:

a. *Install equipment with appropriate safety surfacing underneath and sufficient clearance around and between pieces.*

b. *Plan for the ages and development of the children in the program.*

c. *Never assume children will use the equipment as intended, so close supervision is a key element in safety.*

d. *Plan regular safety audits by staff or parents to help identify hazards and prevent injuries. The Safe Playground Handbook provides a checklist that can guide the process.*

e. *Plan for regular upkeep. Outdoor space and equipment is exposed to weather, animals and insects, wear and tear, and in some cases, vandalism. To maintain a safe environment, invest in maintenance of the entire area.*

AESTHETICS

Many pieces of playground equipment are offered in the boldest colors of the rainbow. Colors that might work in limited amounts indoors can prove overwhelming to children outdoors. Try to limit the number of colors and to use color to enhance the harmony and natural feeling of the play space. Choose equipment in subdued colors or soften strong colors by combining them with the colors of nature – greenery, sand, soil, stone and wood. To the extent possible, focus on creating a natural and inviting playscape.

CHOICE OF MATERIALS

Playground equipment is generally available in plastic, wood and metal (aluminum or steel). In many cases, the choice of materials is driven by cost, aesthetics, and durability. Regardless of your choice of materials, be sure the equipment meets both CPSC and ASTM standards. When equipment meets those standards it will be indicated in the product description. Other important considerations are the types of warranties provided and the particular needs of the environment in your area (weather, risk of vandalism, etc.).

MATERIALS USED IN MANUFACTURED PLAY EQUIPMENT

MATERIAL	DESCRIPTION/ IMPORTANT CONSIDERATIONS	PROS AND CONS	COST TO EQUIP PLAYGROUND[1]
LIGHT-WEIGHT MOLDED PLASTIC	This type of play equipment is typically available at local discount retailers. It generally consists of things such as small playhouses, very small climbers/slides, little cars, molded animals, etc. The pieces are usually single level and snap together. Its intended use is residential, not commercial.	■ Inexpensive ■ Readily available ■ Not intended for use in child care playgrounds ■ Does not have structural integrity/ durability required for child care use ■ Does not meet CPSC and ASTM standards for child care playgrounds	$500 - $7,000
HEAVIER RECYCLED PLASTIC OR VINYL-SAWDUST COMPOSITE	These are often manufactured to look like wood structures. The higher quality structures from this material come in natural earth tones, have 25+ year warranties, and are designed for a higher level, more commercial use.	■ Relatively inexpensive compared to wood/metal counterparts ■ Resists splintering/splitting ■ Does not attract insects or pests ■ Good color options ■ Can add parts and configure to site specifications ■ High quality options have good structural integrity ■ May not be as durable long-term as wood or metal counterparts ■ May be affected by extreme heat or cold ■ Lower quality options may lack structural integrity of wood/metal counterparts	$9,000 - $30,000+

MATERIAL	DESCRIPTION/ IMPORTANT CONSIDERATIONS	PROS AND CONS	COST TO EQUIP PLAYGROUND[1]
WOOD	Wooden structures offer the most natural appearance in an outdoor space, even with the addition of metal or plastic components. If you are interested in wooden equipment, check with the manufacturer regarding the availability of naturally decay-resistant wood, the type of preservative used in their pressure-treated lumber, and warranties. Some vendors offer structures made of redwood, a naturally decay-resistant wood that is slightly more expensive.	■ Less expensive than metal ■ Natural look and feel ■ Many good options available for commercial child care playground use ■ Doesn't last as long as metal ■ Can splinter and split ■ Must be properly treated to resist insects and rot ■ Requires on-going maintenance	$18,000 - $50,000+
METAL	Metal is by far the most durable and vandal-resistant material for playground equipment. In most early childhood uses, the metal is powder-coated with a colored vinyl product that makes it rust-resistant and more child-friendly. Many of the play components are also made of plastic, so attention to creating a unified color scheme can make the difference between beauty and chaos. One reason why municipal playground equipment is so often made of metal is that it can last two or three times longer than other materials. The higher cost reflects the difference. If using metal, make sure that the surfaces are treated (such as with heavy vinyl) and that it is either painted or galvanized to resist rust or corrosion.	■ Very durable ■ Vandal resistant ■ Weather resistant ■ High level of structural integrity ■ Expensive ■ If surface is untreated the metal can get very hot when exposed to high temperatures and sun	$25,000 - $60,000+

[1] *The actual cost will depend on the amount of equipment purchased and the age of the children using it. These costs are for equipment only and do not include costs of surfacing, materials, site work, etc.*

! *As of 2004, wood treated with the most common preservative, Chromated Copper Arsenate (CCA), can no longer be used in constructing playground equipment. Because of concerns about the health effects of long term exposure to CCA, the Environmental Protection Agency (EPA) worked with the lumber industry to reach a voluntary agreement to cease use of CCA preservatives. Since most unpainted wooden playground equipment used CCA, this has had an impact on the industry.*

LIST OF PLAYGROUND EQUIPMENT CATALOGS

CATALOG	PHONE	WEBSITE
BCI BURKE COMPANY	800-356-2070	www.bciburke.com
COMMUNITY PLAYTHINGS	800-777-4244	www.communityplaythings.com
FOR KIDZ ONLY	800-979-8898	www.forkidzonly.com
KAPLAN EARLY LEARNING	800-334-2014	www.kaplanco.com
KOMPAN	800-426-9788	www.kompan.com
LANDSCAPE STRUCTURES	888-4FUNLSI	www.playlsi.com
PLAY WITH A PURPOSE	888-330-1826	www.pwaponline.com
SAFEPLAY SYSTEMS	800-260-7218	www.safeplaysystems.com
UNITY SURFACING	800-293-9822	www.surfacingsystems.com
ZEAGER BROS.	800-346-8524	www.woodcarpet.com

SCALE

The most important aspects of scale are whether the equipment fits the play area with adequate clearance for safety, and whether each piece is the correct size for the children who will use it. Manufacturers often specify a wide age range of 2 to 5 years, or in some cases, 3 to 8 years to indicate the appropriate user group for a structure. In addition to looking at their age guidelines, consider children's body sizes and development as critical criteria in determining whether a piece of equipment is of the appropriate scale for the children who will be using it on your playground.

PLAY VALUE

Play value is much more than the number of components on the structure. Look for equipment that stimulates more than one type of play. Opportunities to climb, jump, balance and slide, and test one's skills are key to large muscle play. Dramatic play will be enhanced with a sense of enclosure, and props like steering wheels, windows and ledges. Social and emotional development are supported if a child can gain positive recognition for his accomplishments on the structure, so check on whether children can both "see and be seen" from high points on the structure. Assess whether the structure will grow with your children by offering more than one level of challenge, particularly if it serves children of different ages and abilities.

Managing the Cost of the Project

The costs of a developing an outdoor play area include planning and design services, demolition and site preparation if needed, the equipment, appropriate safety surfacing and landscaping materials, and the labor charges for construction and installation. Even for a small project, these costs quickly add up to tens of thousands of dollars. So, how can you proceed if you have limited resources?

1. **Consider phased development of your play area.** Work with a landscape architect or design team who can put together a complete design, help you identify equipment and other site amenities, provide cost estimates and a plan for developing the play area in phases. Choices of landscaping and natural materials can be adjusted as the plan is implemented, but choose an equipment vendor carefully so that even if equipment is purchased over two or three years, there is a unified look and feel to the finished play area.

2. **Go the "landscaping route" and commit to developing a natural playscape** with an emphasis on sand, water, trees, plants, and the experiences a child can have exploring the sounds, smells and feel of nature during unstructured outdoor play. If your plan calls for planting trees or shrubs, shop at the end of the season when large plants are frequently discounted by 50%. Plant herbs – most are easy to grow, offer interesting colors, textures, scents and tastes and they are child-safe. Make bird houses with the children and put up birdfeeders. Carefully select small pieces of play equipment that fit the space and incorporate them into the landscape rather than letting them dominate the play area. Provide and display loose parts throughout the play area to enhance and extend the play.

   A good resource on natural playscapes is Planet Earth Playscapes in Spencer, New York. They have a great website, www.planetearthplayscapes.com with photos and plans for playscapes, lists of child-safe plants, and many resources. They can be reached by telephone at 607-589-7887.

3. **Look into volunteer opportunities.** The use of volunteer labor can reduce the cost of your playground by as much as 40%. This process requires considerable planning, and also requires that at least some of the volunteers have skills in things such as carpentry and landscaping. It is also extremely important for an individual or organization to take a leadership role in organizing and overseeing the project.

4. **Seek out opportunities for donated or reduced cost materials.** Before paying full price, make sure to contact local nurseries and landscape professionals to see if they might be willing to donate any materials or services. Check with local lumber dealers and surfacing vendors to see what assistance they might be able to offer. Make sure to check with center parents and staff to see what connections they might have. If you are purchasing manufactured equipment, don't forget to ask about sales, potential discounts or free shipping or installation options. There are also some free and reduced cost trees and plants available. Two websites that provide information on this are:

   www.freetreesandplants.com
   www.arborday.org

Resources

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American Academy of Pediatrics and American Public Health Association. *Caring for Our Children: National Health and Safety Performance Standards*. National Resource Center for Health and Safety in Child Care. Aurora, CO: National Resource Center for Health and Safety in Child Care, 2002

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Keeler, Rusty. "20 Ways to Create Play Environments for the Soul," www.planetearthplayscapes.com

Olds, Anita Rui. *Child Care Design Guide*. New York: McGraw-Hill, 2001

Olds, Anita and Associates. *Architectural Prototype Document*. Boston: Commonwealth of Massachusetts DCPO, 1987

Organizations

American Society for Testing and Materials (ASTM)
100 Bar Harbor Drive
West Conshohocken, PA 19428-2959
Phone 610-832-9585
www.astm.org

International Play Equipment Manufacturing Association (IPEMA)
8300 Colesville Road, Suite 250
Silver Spring, MD 20910
Phone 800-395-5550
www.IPEMA.org

US Consumer Product Safety Commission (CPSC)
Washington, DC 20207
Phone 800-638.2772
www.cpsc.gov

US Department of Justice
Americans with Disabilities Act (ADA)
Final rules regarding outdoor play areas:
www.access-board.gov/play/finalrule.htm

American Academy of Pediatrics
www.aap.org

National Program for Playground Safety
National Action Plan for the Prevention of Playground Injuries
www.uni.edu/playground

National Association for the Education of Young Children (NAEYC)
www.naeyc.org

LISC

CICK

Community Investment Collaborative for Kids

Community Investment Collaborative for Kids
A Program of the Local Initiatives Support Corporation
501 Seventh Avenue, 7th Floor
New York, NY 10018
Telephone: 212-455-9800
www.lisc.org

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