

Playgrounds

THE NEED

Children learn through play. They develop physical skills, they learn about their environment, and they learn how to think about the world. The better they play, the more they develop. Child development experts seem to agree on this. Unfortunately, all the opportunities for play aren't designed according to the recommendations of these experts.

Some of the clearest demonstrations of this are in the places we specifically expect our children to play. Some playgrounds have steel equipment and paved surfaces that are virtually indestructible but endanger children by their very designs. Some playgrounds have equipment that has deteriorated or been vandalized and is no longer safe. Some of the more modern playgrounds look tremendously attractive to adults but lack play value that will involve children in continuing, educational experiences.

Many community parks and child-care centers lack

safe, well-designed equipment that encourages child development. In younger communities, playgrounds are scarce. And in virtually every community, playgrounds should be evaluated for safety and repaired to protect children from injuries.

What Clubs Can Do

Kiwanis clubs can take action in all of these areas. A club interested in playgrounds should begin by surveying experts in the community. The Young Children committee can contact the community's parks and recreation department, the school system, child-care centers, churches, Head Start centers (US), and any other organization that provides playgrounds. These groups can be asked whether their playgrounds are safe, offer appropriate experiences for young children, and have the capacity to serve the number of children now using them. See the sample survey letter on page 13.

The committee also

should contact nearby universities with early childhood and education programs and local leaders of the National Association for the Education of Young Children, the International Association for the Child's Right to Play, the National Recreation and Park Association, or the Association for Childhood Education International. Contact information is on page 12. These experts can be asked for recommendations on the most important improvements to playgrounds and the best methods to achieve these improvements.

The resulting service project is likely to involve safety inspections, purchase of new equipment, or development of a new playground. These activities are discussed in detail in this bulletin.

EVALUATING PLAYGROUNDS

An analysis of playground injuries in nine countries indicate that each

year, 3,000 to 4,000 playground accidents occur per 100,000 children. About 1,000 of the injuries require a trip to a hospital emergency room, and most of those are head injuries and bone fractures.

According to studies conducted in the 1970s, young children more often suffered playground injuries than other age groups. Cuts were the most common kind of injury, most often on the head, face, or neck, and usually caused by a fall. Studies in the 1980s indicated that the equipment involved in the greatest number of injuries were swing sets, followed by climbing equipment, slides, and seesaws (teeter-totters).

These studies clearly indicate how communities need to examine their playgrounds for safety. Besides reviewing each piece of equipment to ensure its safety, this inspection should address five general concerns.

The most important concern is protective surfacing. Many playgrounds are built on asphalt, concrete, hard-packed coarse gravel, or hard-packed earth. About 60 percent of playground injuries are caused by falls from playground equipment, and one study concluded that falls from heights of three meters (10 feet) almost always result in a fracture or concussion. Yet, one expert concludes that half of the playgrounds in the United States have no cushioning or protective surface below

equipment and 90 percent of our playgrounds lack the generally accepted criterion for safe cushioning.

Protective cushioning can be provided through a variety of materials. Most playgrounds use a loose material such as sand, pea gravel, or wood chips, filled to a depth of 10 to 12 inches (250-300 mm). Chopped tires provide the greatest cushioning, followed by organic fill (such as wood mulch, bark nuggets, and wood chips), and inorganic materials (various sizes of sand and gravel).

There are advantages and disadvantages to each of these materials. Chopped tires are dirty and can be burned by vandals. But they require little raking maintenance, don't freeze, and don't get blown around. Organic materials resist compacting better but decompose over time and can harbor micro-organisms or insects. Inorganic materials aren't wheelchair accessible but are much more affordable. Sand is a wonderful play medium, but it gets in children's eyes. Young children may put pea gravel in their ears or noses but generally isn't affected by water or temperature.

While manufactured materials, such as rubber mats and synthetic turf, vary in quality, many provide excellent protection. Generally designed to put over a hard surface, they can be an excellent solution for playgrounds built on concrete or asphalt. The greatest

drawback to these materials is their cost. These surfaces are also subject to vandalism. See the chart on page 8 for a review of materials.

The second general concern is the height of equipment. The farther a child can fall, the more severe the injuries can be. Height standards vary by country, but considering the factors involved (frequency of falls, variability of surface, general lack of maintenance of structures), the shortest standard for fall height seems wisest: 8 feet (2.5 meters). Furthermore, all platforms more than 2 feet (600 mm) above the ground should have protective railings/walls that are 38 inches (1 meter) high and cannot be climbed.

The third concern is entrapment. Openings should be less than 3 inches (75 mm) or more than 10 inches (250 mm) so children cannot get their heads caught. Struts and supports should not form angles of 55 degrees or less so children cannot get stuck.

The fourth concern is pinch and crush points. In heavy, moving play equipment, the under-carriages, rotating axles, tracks, and contact areas can threaten limb or life. Merry-go-rounds, pulleys, seesaws, glider swings, and other similar equipment must be examined for these dangers.

Finally, all equipment should be examined for protrusions and sharp areas. Bolt ends, exposed tubing ends, and protruding nails can puncture, cut skin, or catch clothing, which is

particularly dangerous if it can result in suspending and strangling a child. Rough metal edges, as on a loose slide bed, can cause serious cuts as children move their fingers down the edge. Splinters, protruding nails, rough edges and similar hazards should be eliminated. Bolts should be recessed or capped.

In addition to these general concerns, each piece of play equipment should be inspected for specific dangers. For instance, a heavy swing seat made of wood or metal left moving by one child may hit a passing child in the head. This common injury can be avoided easily by installing lightweight plastic, rubber, or canvas seats.

The checklists on pages 14-20 provide simple methods for a club to evaluate local playgrounds. The first page asks questions about the entire playground. The second page lists concerns for specific equipment. Each "NO" that is checked indicates a danger that should be addressed. To start this evaluation process, contact the people in charge of the playgrounds, local experts on safety and child development, emergency room doctors and pediatricians, and concerned parents. Invite a committee of four to six people to evaluate each playground so dangers aren't overlooked.

PLAYGROUNDS

There is a tremendous need for new playgrounds. People live in new communities that were designed without play areas. Many new schools have inadequate space and equipment. Some older playgrounds have not been maintained and should be rebuilt. Perhaps most surprising, many existing playgrounds don't serve children well.

Building a new playground is a major undertaking that should only be addressed by a partnership of community groups. If a Kiwanis club concludes from its community needs analysis that a playground should be built, it must involve a coalition of families, school personnel, the parks and recreation department, safety officials, businesses, child-serving organizations, other service clubs, and elected officials. The group can then form committees to research playground design, safety, and costs (see book list on page 11); identify and evaluate possible sites; and explore fund-raising activities. Only after these committees have developed specific recommendations will the coalition be able to decide whether to build a playground and how ambitious the design should be.

Planning

Proper planning of a new

playground will require thorough research and consultation with experts. The list of books on page 11 can be a starting point, and each book will direct the committee to additional sources of information.

The committee will face two major decisions during the research phase. First, it will need to decide what type of playground to build. Joe Frost, one of the leading experts on playgrounds, suggests that there are four types:

Traditional—A flat area with steel equipment (usually swings, slide, seesaws, climber, and merry-go-round) installed in a straight row. This is the kind of playground schools had when most Kiwanians were growing up. The play value is lower than it could be. More important, the playground is dangerous. The poorly designed equipment has pinch points, protruding bolts, heavy swing seats, metal surfaces that bake in the sun, and inadequate retaining walls. It is generally in need of maintenance, with cracked wood, rusted fasteners, loose steps, stiff joints, and bent chain links. And the equipment sits on pavement or hard-pan soil that guarantees an injury to a child who falls from any height.

Contemporary—Usually designed by an architect, the playground is very attractive to adults. It is often terraced and uses predominantly wood equipment sold by a manufacturer. Well-designed

CREATING NEW

contemporary playgrounds have greater play value and are safer. They have cushioning materials beneath equipment, retaining walls on raised platforms, linked play areas, separate areas for moving equipment, recessed bolts, and covers over pinch points. However, each playground must be examined carefully because some look modern but retain many of the dangers of the traditional design.

Adventure—An informal playground that looks messy and unorganized to adults. It is stocked with things that children can play with (building scraps, tools, cooking utensils, animals) and generally requires a play leader to assist children. Studies indicate that adventure playgrounds have the greatest play value for children and are generally safer than other playgrounds.

Creative—Combining features of the other playgrounds, it is usually designed to meet local needs and interests—and often has some play equipment that is built locally too. Many preschools have creative playgrounds because the teachers have chosen features specifically for the developmental stages of the children.

The second decision of the research phase is whether to hire consultants or designers to plan and develop the playground. Concerns about cost often motivate playground committees to avoid hiring a consultant. Unfortunately, this tends to

move the planning process to selection of manufactured equipment that is assumed safe simply because it is in a catalog. As the safety checklist in this bulletin indicates, this is a poor assumption. Even the purchase of new equipment should be reviewed by someone knowledgeable. Furthermore, at the cost of equipment and installation today, a playground must be viewed as an investment. With an investment of this size, it makes sense to have an expert who can evaluate each expenditure for its play value and safety.

By working with a local university or contacts from the associations listed on page 10, an inexpensive consultant can be found. The committee should turn to the consultant at the end of each step in the planning rather than having the consultant as a member of the team.

Funding and Costs

For most clubs, the prospect of leading an effort to build a playground is very attractive until the question of cost arises. Most playgrounds built today are expensive. There probably isn't a way for the average club to make this a no-cost project. However, the cost of the project and who pays for it should be viewed creatively.

First, look at how large an area will benefit from the playground and how to seek support from that entire community, from the biggest

companies to the smallest, from the organized adult clubs to the least organized children. The committee should consider some of these strategies:

Sponsorships—

Businesses and individuals could make large contributions to sponsor specific pieces of play equipment or areas of the playground. To succeed in finding sponsors, the committee will need to involve potential sponsors early in the discussion process, before the question of financing is a concern. After the potential sponsors become involved and have a relationship with the group, they can be asked to assist by making large donations and working with other committee members to solicit support from their contacts in the community.

Direct-Use In-Kind

Donations—Some businesses won't be able to make cash contributions but could make in-kind donations—donations of service or items they sell or use in their business. In some cases, there will be direct connections to the playground. For instance, a contractor with a back-hoe, a company that sells fences, and a plumber could each provide a direct service or equipment to help build the playground.

Indirect-Use In-Kind

Donations—A greater challenge is to use in-kind donations that can't be used to build a playground. Donations of merchandise and food from restaurants

could be used to organize a carnival, fun fair, casino night, or auction. Donation of a few large prizes could be the basis for a raffle. If restaurants and other business agree to discounts, a coupon book can be created and sold. The trick is always to find some way for every business to provide support. If the coalition can get every business in town to commit to one form of support, several different fundraisers can be staged over a year to properly take advantage of their generosity.

Organizations—There are many organizations to draw into the process. These range from the obvious choices, like other service clubs and women's clubs, to organized groups that don't normally provide service. This is a large category that covers sports leagues (baseball to bowling), hobby groups (quilters to ham radio operators to bridge clubs), neighborhood associations, the League of Women Voters, and political parties. And somewhere between these examples are groups that often can be persuaded to support a good cause for children, such as churches and parent-teacher associations. Many of these groups could develop their own projects, each to sponsor a piece of playground equipment. Or several groups can be drawn into planning a single, larger fund-raising effort.

General Public—Of course, the public buys coupon books and supports

community events. However, the committee also may want to consider putting out coin canisters at businesses or even selling Kiwanis peanuts.

Children—More than anyone else, the playground is for them, and many will want to contribute. The committee can work with the schools and youth leaders to develop avenues for the children to contribute. This can be through classroom projects and collections, or it can involve child input used by adults. For instance, a poster campaign or contest can be used to make the public aware of the park project and be a fund-raiser at the same time. The winner of the contest can be chosen by “vote,” having people put money in coin canisters in front of the displayed posters. Or the winning poster can be printed and sold.

Other Kiwanis Clubs—Appeal to clubs in other parts of the district for specific kinds of help. Ask a club to be the weekend host for the winner of a raffle, or ask clubs to sell raffle tickets for an exciting weekend in your community.

The fund-raising committee must plan as carefully as the committee that develops plans for the playground. It should draw people with fund-raising experience into the committee, such as members of the clergy and nonprofit association executives. And, it may decide to establish a series of smaller, achievable

monetary goals (related to particular work phases and equipment purchases) and plan activities to reach those goals (or specific organizations to take on those goals). It's always easier to build on small successes than large failures.

One approach to building a playground is to limit the costs as much as possible. After soliciting donations of land and materials, costs can be further reduced by building play structures instead of purchasing equipment. Experts on play and child development have built entire playgrounds out of the materials found and donated in the community. These cost-reducing measures need to be slightly offset by use of a consultant to ensure that each structure is safely designed and built.

Sites

Selecting a site for a playground requires juggling several conflicting demands. It should be accessible to the children it serves. However, it shouldn't be dangerous to travel to. It should preserve nature and local geography—including trees, hills, or a stream—but it needs flat areas for certain kinds of play and equipment. The size of the playground should be large enough to accommodate 30 children at one time but small enough for an adult to monitor the entire area.

Playground experts recommend planning 100 square feet (9.3 square

meters) for each child user per day. This would allow space for appropriate equipment, and it spreads the wear on grassy areas over enough land to allow grass to continue growing. Thus, a typical playground that 100 children played in each day would require 10,000 square feet (930 square meters). However, designers have found ways to provide sufficient play opportunities in smaller areas, and younger children require less space.

Design

The design process is the most challenging part of a playground project. A successful playground encourages children to explore, experiment, challenge themselves, interact with others, and develop day by day. An unsuccessful playground becomes an area where children play poorly, unable to continue and expand their games, seeking excitement through inappropriate and dangerous play, and fighting with one another.

The design committee must understand the needs of children and how playgrounds meet those needs before it even begins to develop designs. The first step is to visit playgrounds, looking at traffic flow, risks for injury, and the variety of play experiences. Committee members also should watch children who aren't in a playground and see how they play, remember what they did as a child, and ask children

what they like to do.

Qualities and Objectives

Through the design process, the committee needs to keep in mind the qualities that ensure play value and effective use of the playground. These qualities affect decisions about everything from pathway design and equipment purchase to color choices and plants. So, as design decisions are made, they must be evaluated and adjusted to meet the following ultimate objectives.

1. The playground should encourage play that encompasses:

a. *Multiple activities*—An effective playground draws in children to play through defined, inviting paths to clear play zones. Equipment is linked within a zone, and zones have access linkages and age-appropriate equipment.

b. *Physical exercise*—Given appropriate activities and equipment, children draw pleasure from physical activity and test their strength and endurance.

c. *Interaction with resources*—With access to a range of fixed equipment, tools, loose parts, art supplies, and other materials, children focus on groups of materials and their interactions.

2. The playground should provide a range of

developmental experiences that encourage growth in each of the following areas:

a. *Physical*—Children get their exercise and develop their coordination on equipment for large muscle activities and in construction activities.

b. *Social*—Equipment can encourage socialization through group projects and dramatic play; a variety of defined places with adequate space for groups; places for solitary, parallel, and cooperative play; places for games with rules; opportunities for adult involvement.

c. *Cognitive*—Children are challenged to think in different ways by creative play, play with loose parts, make-believe, and dramatic play. Open-ended structures challenge the imagination. Curiosity can be piqued through equipment that can change, materials for construction and experimentation, design surprises, incongruities, plants, and animals.

d. *Self-concept*—Kids need graduated challenges, turn-around points, equipment scaled to the child, and an illusion of risk.

e. *Sensory*—Effective design interests the children and encourages observation through changes of height and scale, curves, layers, interesting details, real-world objects, varied lighting, different temperature zones, and interesting movement.

The finishing details must offer a variety of interesting colors, textures, and fragrances.

3. The playground should be adult-friendly, with provisions for:

a. *Maintenance*—Each play area should be designed for easy upkeep and have convenient, adequate storage. Equipment should be easy to clean and maintain.

b. *Supervision*—Adults need spaces organized to allow adequate supervision, with good sight lines and comfortable seating that doesn't intrude on the play areas.

c. *Gathering Places*—Adults prefer seating in which they can talk while watching the children and areas where they can comfortably play with the children. Rest areas are helpful too.

4. The playground should never be finished, offering new challenges to children and improving the ways it encourages and structures play.

5. The playground should be safe, protecting children from harm and directing them to appropriate activities.

To properly plan the playground and make sure everything is included, the committee needs to prepare a master plan and a three-dimensional model. This

ensures effective use of space and good division into zones. The actual construction of the playground will require many steps, but in terms of planning the playground, the process can be reduced to three steps.

- Area preparation. (See page 8.)
- Installation of equipment. (See “Zones and Equipment on page 8.)
- Checking for safety and play value. (See safety checklist on page 20.)

Area Preparation

Contours—Try to preserve the natural contours of the land. They provide interest and motor challenges. Work with these contours to identify or develop areas that will provide screening from the wind, enclosed areas for privacy, higher vantage points that even toddlers can climb, a pit or ditch, and perhaps even an amphitheater.

Drainage—Make sure the land has a gentle slope away from buildings and fill in low areas where water can collect. Try to use natural patterns to channel water out of the playground. If drainage is a problem in the area, consider putting a layer of pea gravel under the cushioning material around swings and other play equipment.

Plumbing—Install water lines for a drinking fountain and faucet (or hydrant) to one side of the playground. Also,

consider putting in a sprinkler system for grassy areas.

Fence—The fence should be at least four feet high. Chain link fence is far less expensive than wood and can be decorated. A top rail makes it safer. Gates should provide easy access from buildings, street, or parking area; make sure each gate can be secured or locked. Plan to have one 12-foot (3.6 meters) gate for delivery of sand and equipment.

Storage Sheds—There should be several large storage sheds, positioned for easy access to the play areas that need equipment.

Plants—Try to preserve the trees, shrubs, and other natural features that are on the land. However, check these plants for toxicity and attractiveness to insect and animal pests. Be similarly careful about new plants you put into the playground, and check these also for hardiness and growth rate. Try for variety and interesting seasonal differences.

Position trees and bushes to provide shade and wind screens. In open spaces, put in a durable grass.

Fall Zones—Establish a fall zone of 10 feet (3 meters) around all play equipment and structures. Cover this area with sand or other cushioning material to a depth of one foot (300 millimeters)—and make it a two-foot (600 millimeters) depth around merry-go-rounds and under slides. Set up retaining walls to hold the cushioning material in the fall zone.

Other Surfaces—Digging, mud play, and gardening areas require loose soil. The water play area requires sand. Paths for vehicles can be a hard surface, like concrete, but the best pathways for toddlers are old conveyor belts. Vehicle paths should use the geography, going over hills and around other obstacles. If there is a game area for older children, it will need to have a hard surface.

Zones and Equipment

Zones—The playground should be arranged in zones for the developmental stages of childhood. The access links between areas for younger children can be designed as barriers for children not ready to move into the next play zone, keeping them away from more active areas. Access links between areas for zones designed for older children should simply define the boundaries. Each zone should invite movement within and between zones. There should be a quiet area for contemplation and solitary play and multiple zones for active play. Materials that often are combined should be grouped together, such as sand and water, large structures and loose parts, wheel toys and pathways.

Equipment—The playground should have complex, multi-function equipment that is arranged for children to move or connect their play to other structures. There should be equipment for each type of play—gross motor, construction, dramatic play, and organized games. Moving equipment should be kept away from major pathways and have adequate entry space. The most important piece of equipment for the playground is a multi-function climbing and platform unit, with loose parts nearby. Loose parts and smaller pieces of moving equipment greatly increase the play value of a supervised playground. Some experts suggest that new playgrounds should be built without seesaws and merry-go-rounds because of their limited play value and greater potential for accidents.

CUSHIONING MATERIALS

	Needed Depth	Relative Cost	Maintenance	Advantages	Disadvantages	Cushioning Less When
Sand	12" 300 mm	Low	High	Good play Material	Blows, Gets in eyes	Wet or frozen
Pea Gravel*	9" 230 mm	Moderate	High	Drains well	Put in ears and nose	Frozen
Wood Chips/ Pine Bark	9" 230 mm	Moderate	High	Compacts less, Wheelchair accessible	Rots, Can hold insects and micro-organisms	Wet or frozen
Chopped Tires	6" 150mm	High	Low		Very dirty, Can be set on fire;	
Synthetic	Double layer	Very High	Low	Stationary, Installs over pavement	East to vandalize, Must install over pavement.	Mat

* Not recommended for young children

LIABILITY

Every company involved in playground design and manufacture has been sued because of injuries to children. So have schools, PTAs, fast-food franchises, and the people who lead these organizations. Anyone who works to improve a playground must seriously consider the question of liability.

The causes of injury on playgrounds tend to be attributed to nine related factors: inappropriate layout and design of the playground, inappropriate design of the equipment, improper installation of the equipment, lack of age-appropriate or ability-related equipment, inadequate maintenance, lack of adult supervision, dangerous behavior by children, misuse of equipment, and unsuitable clothing.

The first four of these relate to the design and building of the playground, the next two involve the way the playground is run, and the last three relate to children's behavior and preparation. If a child is injured, the last three factors will not be considered, so four of the six reasons to sue will relate to the design and building of the

playground. This is why a Kiwanis club should not be the agency officially responsible for creating or remodeling a playground.

There must be an organization that forms specifically for the improvement or development of the playground. At least one member of that organization should be a lawyer who understands state law on liability. The organization must obtain liability insurance and professional assistance from someone with a record of experience in design. This professional consultant should be separate from the playground builder so he can evaluate the work of the builder.

All companies hired to design or build the playground should be asked to provide references and information about their liability insurance, lawsuits, and training of representatives. Before being hired, they should agree to sign a statement at project completion that the playground conforms to national safety standards and guidelines. After consulting with other experts and reading some of the books listed on page 11, the committee also may want to

include additional guidelines that the company should agree to and sign.

The community organization that creates the playground should also make provisions from the beginning of the process to donate the playground to the school, town, parks department, or other organization that will become responsible for the maintenance and supervision of the playground. The agreement to donate the playground should involve a plan for the school or government agency to sign a "hold harmless" agreement that states liability for the playground is assumed by the school or government agency. Before signing such a hold harmless agreement, representatives will want to see design plans and the signed statements that the playground meets national safety standards. They also may want to arrange their own safety inspection.

The agency that assumes responsibility for the playground should be urged to develop a maintenance program, train adult supervisors, and provide training to children who play there.

COMPANIES

BigToys

7721 New Market Street, SE
Olympia, WA 98501
Phone: 866/814-8697
Fax: 360/528-8680
E-mail: info@bigtoys.com
Web site: www.bigtoys.com

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Safe playground supervision kit.

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Phone: 570/522-8080
800/327-7571
[www.playdesigns.com/
home.html](http://www.playdesigns.com/home.html)

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Playground Clearing House Inc.

238 Sycamore Lane
Phoenixville, PA 19460
Phone: 800/352-1137
[www.world-playground.com/
consultants.htm](http://www.world-playground.com/consultants.htm)

*Resource information for
playgrounds.*

Playland Inc.
150 Adamson Industrial Blvd.
Carrollton, GA 30117
Phone: 770/834-6120
800/356-4727
Fax: 770/834-6495
E-mail: sales@playland-
inc.com
www.playland-inc.com

Manufacturer and distributor of modular play systems and independent playground equipment.

Playworld Systems, Inc.
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Lewisburg, PA 17837-9795
Phone: 570/522-9800
800/233-8404
www.playworldsystems.com

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R.J. Thomas Mfg. Co. Inc.
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Cherokee, IA 51012
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Fax: 712/225-5796
E-mail: pilotrock@
rjthomas.com
www.pilotrock.com

Park and camp site equipment (benches, grills, tables, etc.)

Recreation Creations Inc.
215 W Mechanic Street
Hillsdale, MI 49242
Phone: 800/766-9458
Fax: 517/439-1878
E-mail: rci@rec-creations.com
www.rec-creations.com

Manufacturers of playground equipment and park amenities

Sof Surfaces
4393 Discovery Line
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Petrolia, ON N0N 1R0
CANADA
Phone: 800/263-2363
Fax: 519/882-2697
International Inquiries:
519/882-8799
www.sofsurfaces.com

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Techno Dynamo Inc.
6780 P.E. Lamarche
St. Leonard, Montreal, QC
CANADA H1P 1K1
Phone: 800/790-0034
613/833-2220
www.technodynamo.com

Playground equipment.

BOOKS

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L.D. Bruya and S.J. Lagendorfer, editors
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L.D. Bruya
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Boston: Allyn and Bacon, 1979

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Jeremy Hewes
Boston: Houghton Mifflin, 1975

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Paul Hogan
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Paul Hogan
Phoenixville, PA: Playground Press

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John Mason
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Management for Outdoor Play
Settings for All Children*
R.C. Moore, S.M. Goltsman,
and D.S. Iacofano
Berkeley, CA: PLAE Inc.,
1987

*Handbook for Public
Playground Safety: General
Guidelines for New and
Existing Playgrounds*
Washington, DC: US
Consumer Product Safety
Commission, 1980
www.cpsc.gov/cpsc/pub/pubs/325.pdf

Contact information for selected speciality publishers:

American Society for Testing
and Materials (ASTM)
100 Barr Harbor Drive
West Conshohocken, PA 19428
Phone: 610/832-9585
Fax: 610/832-9555
www.astm.org

AAHPERD—American
Alliance for Health, Physical
Education, Recreation, and
Dance
1900 Association Drive
Reston, VA 22091
Phone: 703/476-3400
800/213-7193
www.aahperd.org

ACEI—Association for
Childhood Education
International
17904 Georgia Avenue, Ste. 200
Wheaton, MD 20832
Phone: 301/570-2111
800/423-3563
Fax: 301/570-2212
www.acei.org

High/Scope Educational
Research Foundation
600 N. River Street
Ypsilanti, MI 48198-2898
Phone: 734/485-2000
Fax: 734/485-0704
www.highscope.org

US Consumer Product Safety
Commission
Washington, DC 20207
Phone: 800/638-2772
Fax: 301/504-0124

Organizations

Contact the organizations below to find local members who may have expertise on play and playgrounds.

National Association for the
Education of Young Children
1509 16th Street, NW
Washington, DC 20006
Phone: 202/232-8777

National Recreation and Park
Association
2775 S. Quincy Street,
Suite 300
Arlington, VA 22206-2204
Phone: 703/820-4940

Association for Childhood
Education International
11501 Georgia Avenue
Suite 312
Wheaton, MD 20902
Phone: 301/942-2443

International Association for
the Child's Right to Play
Tulegaten 27 113 53
Stockholm SWEDEN
Phone: +46 8 16 56 55

Sample Survey Letter

Theodore Geisel
Whoville Department of Parks
1962 Horton Way
Whoville, OH 26911

Dear Sir:

The Kiwanis Club of Whoville is conducting a survey to learn whether the playgrounds in the community are safe for young children and have sufficient capacity to serve all families. In addition to contacting the Parks Department, we are sending letters to schools, the Whoville YMCA, churches, the Whoville Head Start program, and seven private child-care providers.

We would like to work with you to evaluate the safety of your playgrounds, the kinds of experiences available to younger children, and the number of children who can safely play at a given time. If there are needs for safety improvements or newer equipment, we hope to involve the community and meet these needs.

We are not experts on play or playgrounds, and frankly, we need the help of experts like you to conduct our survey. We have reviewed several current books on play and playgrounds to prepare for this project. Enclosed with this letter you will find a copy of a safety checklist which we would like to use to evaluate the playgrounds. We would appreciate it if you would review it and meet with us to discuss the best way to evaluate the playgrounds.

Please call me at your convenience to set up an appointment with our club's Young Children committee. My phone number is 838-0397. If I have not heard from you by next Wednesday, I will call you. I look forward to working with you.

Sincerely,

D.L. Seuss, Chairman
Young Children:

Priority One Committee

Sample Partnership Letter

Ms. Alice A. Milne
President
Woodston Women's Club
40 Acre Lane
Woodston, LA 19254

Dear Ms. Milne:

The Kiwanis Club of Woodston has conducted a preliminary survey of the playgrounds in the community and has concluded it should work with a number of organizations and community leaders to evaluate the feasibility of building a new playground in Robin Park. We would very much like to have you or your representative attend a meeting on Tuesday, November 12, at 7:00 p.m. in the meeting room at the Woodston Public Library.

We would like to form a coalition to investigate this concern. If the participating organizations conclude there is a need for a new playground, a separate organization supported by the entire community will be created to build the playground.

For this initial meeting, we have invited community leaders from the area around Robin Park, service club and PTA presidents, business owners and managers, school principals, and others who could support this effort. We hope you will attend. Please contact me if you have any questions. My phone number is 899-7648.

Sincerely,

Christopher Tiggere, Chairman
Young Children: Priority One Committee

Sample Solicitation Letter

Richard Scarry
Triple A Hardware
243 Main Street
Centerville, IA 49505

Dear Dick:

I may have mentioned to you that I've been on the Peter Park Playground Committee. Each of the members of the committee is setting up meetings with contacts in the business community to discuss the plans for the park and ask for support. Because of our long-standing relationship, I volunteered to speak to you.

I would like to show you the drawings we have developed and our preliminary budget. Then, we can discuss how you could help the Playground Committee's efforts.

I will call you on Thursday to set up a meeting time. I look forward to talking to you.

Sincerely,

Bea Potter

PLAYGROUND SAFETY EVALUATION

GROUND AND LAYOUT

SAFE	UNSAFE	THE PLAYGROUND SHOULD HAVE:
		A cushioning layer of 10 to 12 inches (250-300 mm) of one of the following: ___ Inorganic (sand, pea gravel) ___ Organic (wood chips, bark nuggets, mulch) ___ Synthetic (chopped tires, mats)
		No standing water and drainage away from building.
		No open drainage ditch or underlying sewage line.
		Clean water for play no more than two inches (50mm) deep.
		Moving equipment away from major paths and with adequate entry space.
		An area for young children away from more active areas.
		No sand or water near concrete.
		Activities of interest to an age group zoned together.
		Access to drinking water and restrooms.
		A four-foot (1.2 m) fence that surrounds the playground.
		Barriers between equipment areas.
		No crowding.
		No plants that are toxic or attract pests.
		Shelter from the sun.
		No suspended hazards that children might run into.
		Fencing around electrical hazards and locks on all electric boxes.
		No guy (support) wires from electric poles or antennas.
		Slip-resistant surfaces.
		Access to a first-aid kit and a phone.

EQUIPMENT (Complete this checklist for each piece of equipment.)

SAFE	UNSAFE	ON TOP AND UNDERNEATH EQUIPMENT, THERE SHOULD BE:
		No protruding screws, nails, or bolts.
		No missing pieces.
		No rust.
		No worn metal links, cables, or connectors.
		No metal surfaces that can be heated in the sun.
		No sharp corners.
		No jagged edges.

		No open ends on metal tubing.
		No wooden splinters, cracks, rotting, or sharp ends.
		No exposed footings.
		No holes or gaps three to ten inches (75-250 mm) in diameter.
		No accessible moving parts that can pinch, crush, or shear.
		No tires that hold water or have exposed wires.
		No frayed ropes.
		No moving parts that can pinch fingers or skin.
		THE EQUIPMENT SHOULD:
		Be six feet (1.8 m) away from walls, fences, and pathways.
		Be secure in ground, not movable.
		Be surrounded by nonabrasive cushioning material that is: ___Not worn or compressed. ___At least 10 (250 mm) inches deep.
		Be age appropriate.
		Have unclimbable 38-inch (1 m) high barriers on all walkways 20 inches (750 mm) above the ground.
		No walkways higher than eight feet (2.5 meters).
		Two coats of varnish or other sealer on any wood treated with preservatives.
		Slip resistant surfaces.

INFANT-TODDLER AREA

SAFE	UNSAFE	THE INFANT-TODDLER AREA SHOULD HAVE:
		A separate section for infants.
		No wood treated with preservatives.
		No pea gravel.
		Cushioning, such as grass or synthetic matting, on walking and crawling surfaces.
		Cushioning on hard surfaces (stairs, rails, corners).
		No heights above two feet (600 mm).
		No steps, ditches, or other immediate changes in height.
		No pools of water.
		Conveyor belts (with no protruding metal) for vehicle paths.
		Strap-in seats on swings.
		No play materials that can lead to choking.
		All surfaces, coatings, and objects safe to lick or eat. (No toxic chemicals in paint, surfaces, plants, water.)
		Coverings for sandy areas when not in use (to prevent visits from cats).

		Adult supervision whenever children are present.
		Portable toys (wagons, tricycles) in good repair.

SLIDES

SAFE	UNSAFE	SLIDES SHOULD HAVE:
		Railing or screens on the climbing and platform areas that are 38 inches (1 m) high and unclimbable.
		Siding on the slide areas that is at least six inches (150 mm) high—7.5 inches (190 mm) for preschoolers.
		A run-off or exit area at the bottom of the slide parallel to the ground (for the child to slow down) that is: __ At least 16 inches (400 mm) long. __ Seven to 15 inches (180-380 mm) above the ground—seven to 12 inches (180-300 mm) for preschoolers.
		A platform at top large enough for a child to maneuver or change position.
		A large landing area of cushioning material that is two feet (600 mm) deep and not eroded.
		A slide bed made of heat-resistant material (plastic or metal with powder coating) or, if made of metal, protected from the sun.
		An average slope not exceeding 30 to 40 degrees.
		A maximum height of eight feet (2.5 m).

PLATFORMS

SAFE	UNSAFE	PLATFORM CLIMBERS SHOULD HAVE:
		No more than an 18-inch (450 mm) drop from one platform to the next.
		Guard rails at least 38 inches (1 m) high on all platforms more than two feet (600 mm) above the ground.
		Floor exits that are no more than 24 inches (600 mm) in diameter.
		Horizontal safety bars across floor openings larger than 24 inches (600 mm).
		No missing, broken, or loose attachments (bridges, slides, or nets).
		No dislodged or missing boards.
		No rotting boards.

CLIMBING UNITS

SAFE	UNSAFE	CLIMBING UNITS SHOULD HAVE:
		No sharp corners, protruding points, or sharp edges.
		No open holes that could entrap fingers.
		No angles less than 55 degrees formed by two adjacent surfaces.
		All openings either less than three inches (75 mm) or greater than 10 inches (250 mm).
		Easily grasped hand holds approximately 1.5 inches (40 mm) in diameter.
		Rungs on ladders not more than 14 inches (350 mm) apart
		No sharp corners, protruding points, or sharp edges.
		No open holes that could entrap fingers.

TIRE FORMATIONS

SAFE	UNSAFE	TIRE FORMATIONS SHOULD HAVE:
		No tires with exposed wires.
		Drain holes at least one inch (25 mm) in diameter in the lowest parts of the tires.
		Tight connections between tires.
		All stacked tires bolted together.
		No worn, loose, broken, or rusted chains, bolts, or cables.

SWINGS

SAFE	UNSAFE	SWINGS SHOULD HAVE:
		A barrier or fence that separates swings from other play equipment.
		Swing seats made of rubber, cloth, or plastic.
		No bent, worn, or rusted chains and connectors.
		No worn or frayed ropes.
		No bolts, hooks, or other protruding points.
		No pinch points.
		Safety straps on all infant seats.
		Each swing seat at least six feet (1.8 m) away from paths, equipment, and fences throughout its swing forward and backward (or complete arc for a swivel swing).
		Each swing seat at least 36 inches (900 mm) away from the ends of the structure and 24 inches (600 mm) from the other swing seats.
		Each swing seat is no more than 14 (350 mm) inches above the ground when at rest—24-36 inches (600-900 mm) for infant seats.

MERRY-GO-ROUNDS

SAFE	UNSAFE	MERRY-GO-ROUNDS SHOULD HAVE:
		No exposed moving parts at the spindle-axle connection.
		No open spaces on the platform into which children could fall or trap limbs.
		No shearing action or protruding bolts on the undercarriage.
		A circular shape.
		Rigid hand holds that do not extend beyond the platform.
		Cushioning material at least two feet (600 mm) deep.

SPRING ROCKERS

SAFE	UNSAFE	A SPRING ROCKER SHOULD HAVE:
		Springs that cannot pinch fingers or arms.
		Limited movement that cannot unseat a child.
		Seats no more than 30 inches (760 mm) above the ground.
		Handholds at least three inches (75 mm) long.
		Footrests at least four by six inches (100 X 150 mm).

SEESAWS (TEETER-TOTTERS)

SAFE	UNSAFE	A SEESAW SHOULD HAVE:
		An enclosure over the axle and suspension mechanism so it cannot crush fingers.
		Handholds at least six inches (150 mm) across.
		Tight connections.
		A cushioned landing surface for each seat.
		Seat heights when horizontal of no more than 39 inches (1 m).
		Maximum seat heights of no more than six feet (1.8 m).
		A maximum angle of 30 degrees.

PLAYGROUND AREA CHECKLIST

As work on design progresses, the committee may find it helpful to use the summary/checklist below to see if the playground offers a range of experiences and challenges. There should be:

Motor activity areas for—

- Swinging—with different types of swings
- Sliding—dry and wet
- Rolling—have hills for rolling bodies, tires
- Climbing—trees, platforms, ropes, ladders, sculptures, tire trees; need multiple levels of difficulty and stopping points
- Jumping—secure launching point and safe, absorbent landing
- Running—open space or pathways with smooth surfaces
- Throwing and kicking—walls, nets, hoops, barrels, trees as targets; balls, bean bags, Frisbees
- Balancing—beams, poles, boulders, planks with give
- Bouncing—trampoline, spring animals
- Riding and Transporting—pathways and wheel toys, carts, and wagons

Quiet time areas for—

- Retreating—hidden from other children and activity
- Watching kids—separated from activity but able to see
- Watching nature—enough dirt, grass, and bushes for insects and small animals
- Eating—tables with chairs

Creative play areas for—

- Building—skeletal structures, frames, canvas, tires, planks, crates, boulders
- Machines—trucks, wagons, waterwheels, clothesline pulleys
- Creative expression—easels, sculpture material, sand, water
- Pretending—stripped down car or boat, or an open-ended structure

An environmental play area for—

- Digging—in sand or soft soil, with timber or truck tires marking areas
- Water play—no water depth more than eight inches (200 mm)—no more than two inches (50 mm) for young preschoolers; can be drained and filled easily
- Animals—sheltered area for ducks, rabbits
- Collections area—for admiring leaves, bugs, seeds, or other collections
- Measurements—rain, temperature, wind speed, shadow length

Comfort areas that provide—

- Needed facilities—drinking water, bathrooms
- Different climates—with sun and wind, sun without wind, wind without sun, and shelter from sun, wind, and rain.
- Seating for adults—with good views of the play areas but not intruding

The books listed on page 13 include wonderful insights into how children play and designs that foster healthy play. Look particularly for those by Frost, Greenman, and Hogan.

PLAYGROUND DAILY SAFETY CHECKLIST

GROUNDS

- Cushioning material at a depth of 10 to 12 inches (250-300 mm).
- No pits in cushioning material below equipment.
- No scattering of cushioning material.
- No trash, broken glass, or foreign objects.
- No exposed roots, holes, concrete footings, rocks, or protruding obstructions in the ground.
- No dangerous insects or animals in the area. No nests or other signs of wildlife.
- No stagnant water.
- No vandalism (fire damage, carving, painting).
- Tree and plants watered and trimmed.
- No electrical hazards (boxes locked and fence gates locked).
- Garbage cans emptied.

EQUIPMENT

- Each piece of equipment is secure.
- Moving parts are lubricated.
- Surfaces are dry and not slippery.
- Padding is in good repair.
- Loose parts and small equipment are properly placed.
- No flaking or peeling paint or varnish.
- No rust, cracks, bending, warping, or broken components.
- No frayed ropes or wires.
- No damaged, twisted, bent, or opened chain links, hooks, or connectors.
- No protruding or uncapped bolts, tubes, or other parts.
- No worn axles, bearings, or swivels.
- No wood that is rotting, rough, or splintered.
- No gaps allowing fingers to be entrapped, pinched, crushed, or sheared.
- No spaces that allow children under moving equipment.
- No loose or broken steps, decks, railings, or protective barriers.
- No spaces that allow movement through protective barriers.
- No loose slide beds.
- No sharp metal edges or points.



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3636 Woodview Trace
Indianapolis, IN 46268-3196
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