DESIGN PATTERNS AND RECOMMENDATIONS
This section includes design principles which are applicable to the entire site of any play area. Unlike the specific design details, these principles deal with larger design issues which should be addressed early in the design process. They include traditional siting, site design, and site development concepts as they are applicable to the needs of children. The overall organization of a play space will be decided through a combination of these principles and the guidelines for different types of play spaces in the next section.

These principles are:

501 Neighborhood-Based Play
502 Network of Play
503 Comprehensive Playgrounds
504 Favorable Microclimates
505 Controlled Access
506 Views To and From Play Areas
507 Proximity of Play Areas
508 Separated But Linked Zones
509 Semi-Enclosed Play Spaces
510 Looped Circulation
511 Continuity and Branching
512 Degrees of Shelter
ISSUE

ONLY PART OF CHILDREN'S PLAY ACTIVITIES TAKE PLACE IN DESIGNATED PLAY AREAS. THE ENTIRE NEIGHBORHOOD AREA IS A SETTING FOR PLAY EVEN WHEN WELL-DESIGNED AND WELL-EQUIPPED PLAY AREAS EXIST IN THE SAME NEIGHBORHOOD.

JUSTIFICATION

There are three important and well-confirmed findings which indicate the importance of neighborhood-based play:

1. Children, especially in the 5 to 10 year range, are the greatest users of public outdoor space (Cooper, 1975).

2. Children tend to play anywhere and everywhere, and not just in designated play spaces. They use the whole neighborhood site for their play activities.

3. The most frequent play activity of children is moving around the home environment. They are constantly on the move, transiting between activities and involved in little activities along the way.

In a study of nine London housing areas, Vere Hole (1966) found that the most dominant child activities were sitting, standing, lying, and walking around the site (43% of all observed activities). This finding contrasted sharply with the very little use of designated play equipment (12%), and ball games (2%). Observational research by the Department of the Environment of England (1973) on another 12 housing areas again demonstrated that children spend a vast majority of their play time in places other than designated play areas. The most popular places to play were streets and other paved areas. The findings are identical in this country. In a housing study in San Francisco, Cooper (1974) found that only 15% of the children's outdoor activities occurred on designated play areas, while 62% occurred on undesignated paved and grassy areas. Paved areas were especially popular, with 44% of activities occurring there relative to only 20% of the site being paved.
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**KEY:** ○ Indicates highest number of observed activity
○ Indicates lowest number of observed activity

**PHYSICAL ELEMENTS AND ACTIVITY TYPES IN APOLLO HEIGHTS**

(from Hester, 1975)

With regard to the predominance of children as users of public outdoor spaces, one study found that in the late-afternoon hours, 5½ times more children than adults were observed over an entire summer of weekends (Cooper, personal communication). Our own research in Milwaukee substantiates this finding—on some streets the children are so numerous and their activities so rapid that even counting them is next to impossible.

Our own site research (Travel Report, 1978) confirmed these findings for military bases also. As we stated in the earlier report:

*By far the majority of younger children we saw outdoors were in the front yards, near the streets, or on house steps and porches. Relatively very few were seen in the designated play areas behind the housing, except when they were a captive audience at the Child Care Center.*

*For example, children were observed quietly floating boats and watching their reflections in pools of standing water, while others were*
playing quietly in the grass and soil under large trees. Meanwhile, no children were playing on the nearby metal play equipment.

Generally, more children were seen playing with features of the natural environment, and in front of the dwelling units, than on designated playgrounds or playing fields. (p. 29)

The theme of the 1978 Seventh World Congress of the International Playground Association was "Play in Home Settlements." The major emphasis and recognition of this Congress was the global importance of the home and neighborhood environment for children's play, relative to designated playgrounds.
PRINCIPLE

NEIGHBORHOOD-BASED PLAY

DESIGN ALL NEIGHBORHOOD SPACES INCLUDING SPACES IN AND AROUND HOUSING, STREETS, BACKYARDS, SHARED OPEN SPACES, ETC., WITH THE PLAY NEEDS OF CHILDREN IN MIND. NEW HOUSING SHOULD BE DESIGNED TO ACCOMMODATE CHILDREN'S PLAY ACTIVITIES. RENOVATIONS AND ADDITIONS TO HOUSING AND ADDITIONS TO LANDSCAPING CAN ALSO BE MADE.

RECOMMENDATIONS

The total environment must be thought of as an environment primarily for children, but since adults (residents, management, staff) need some degree of predictability as to what will happen where, there needs to be some place-structuring of activities. It must be made clear to both adults and children that noisy activities happen in certain places, digging in other places, sitting quietly elsewhere, etc. Children need to know that in certain places . . . they have autonomy over a territory which is theirs. It is important to try and anticipate which spaces will be attractive to children and ensure that nuisance will not be caused through noise or intrusive prying. (Cooper, 1975, p. 232)

RELATED ITEMS

NETWORK OF PLAY
SHARED OPEN SPACES
INFORMAL PAVED AREAS
HOME-BASED ACTIVITY POCKETS
OPEN GRASSY PLAY AREAS
HARD-SURFACE PLAYING AREAS
ISSUE

INFORMAL, NEIGHBORHOOD CONTACT WITH MANY CHILDREN IS A VITAL LIFE EXPERIENCE. CHILDREN ALSO NEED A LARGE VARIETY OF EASILY-ACCESSIBLE ACTIVITIES WHICH ARE APPROPRIATE TO VARIOUS AGES, DEVELOPMENTAL LEVELS, AND INTERESTS. NO SINGLE DESIGNATED PLAYGROUND--NO MATTER HOW ELABORATE--CAN PROVIDE FOR ALL THESE NEEDS.

JUSTIFICATION

In her research, Clare Cooper (1974) found that:

*Children prefer to play and move around in an environment that is varied and full of surprises.*

Children need choice and variety to keep their interest since they rarely are engaged for long in one activity. (p. 375)

Children of different ages (and developmental levels) need very different play experiences, (Schneekloth, Blakely, Boyd and Burke, 1977). Variety for developmental levels, interests, and choices must be provided.

Alexander, Ishikawa, and Silverstein (1977) argue from the standpoint of healthy psychological development, that a wide circle of friends is necessary, and that homes and play areas should be connected to provide sufficient numbers of age mates.

Location is a very important factor in use patterns. Play areas which are hard to get to (unconnected with usual routes, e.g., home to school) are less likely to be used. Play areas which are out of the mainstream--unlinked to other activity areas--are also more likely to remain empty (Bengtsson, 1974).

Therefore, a variety of play activities must be linked with home, other activity areas, normal child routes, and with each other.

*Children and young people of all ages--like adults--should be able to "go shopping" for their play. They need a great variety of activities. The essence of our provision for them must be to give them freedom to choose.* (Lady Allen, 1968, p. 17)
PRINCIPLE

DEVELOP A RANGE OF PLAY ACTIVITIES WHICH ARE LINKED WITH EACH OTHER, WITH HOUSING, WITH OTHER ACTIVITY AREAS, AND WITH CHILD ROUTES. ASSURE A WIDE CHOICE OF PLAY OPTIONS WITHIN EACH CHILD'S HOME RANGE.

RECOMMENDATIONS

- Plan for play in the earliest stages of community development. Integrate play with housing and with other high-use community activity areas.

- Identify existing patterns of child tracks (through remnants of use and unobtrusive observation), identify nodes of children's activity, and plan play areas and connecting links between the nodes and along the tracks.

- Plan a radiating network with youngest-child spaces closest to home, and increasingly wide range of play areas radiating from these. As children are ready to move out to other types of play, they can choose from several options.

- Assure that each individual play area includes as many play activities as possible.

- Plan child areas in conjunction with each other with very evident links (e.g., bicycle paths, pedestrian paths, etc.—see PLAY LINKS) which will help lead children from one to the next.

- As new play areas are added to existing communities, avoid duplicating existing play opportunities in the same general area. Add different activities whenever possible.

RELATED ITEMS

NEIGHBORHOOD-BASED PLAY
COMPREHENSIVE PLAYGROUNDS
HOME-BASED ACTIVITY POCKETS
INFORMAL PAVED AREAS

502-2
THOUGH CHILDREN'S ATTENTION SPAN IS MUCH LONGER THAN ADULTS OFTEN GIVE THEM CREDIT FOR, THEIR INTERESTS DO WANDER IF ONLY ONE PLAY OPPORTUNITY IS PROVIDED.

AS STATED IN NETWORK OF PLAY, CHILDREN SPEND RELATIVELY LITTLE TIME IN ANY ONE ACTIVITY. SUBSEQUENTLY, THE GREATER THE VARIETY OF ACTIVITIES PROVIDED FOR IN A NEIGHBORHOOD PLAY AREA, THE LONGER IT WILL HOLD THEIR ATTENTION.

FURTHER, CHILDREN OF DIFFERENT DEVELOPMENTAL LEVELS REQUIRE DIFFERENT TYPES OF PLAY EXPERIENCES. YET, OPPORTUNITIES NEED TO BE PROVIDED FOR CHILDREN TO INTERACT WITH OTHER CHILDREN OF DIFFERENT AGES. SIMILARLY, THERE ARE TOO FEW OPPORTUNITIES FOR CHILDREN TO INTERACT WITH ADULTS IN A SPONTANEOUS SITUATION. PLAY AREAS WHICH APPEAL TO CHILDREN OF DIFFERENT AGES, AND WHICH APPEAL TO ADULTS AS WELL AS TO CHILDREN, CAN BEGIN TO BRING THE AGES TOGETHER AND TO ENRICH CROSS-GENERATIONAL CONTACTS.

AN IMPORTANT PART OF A PLAY AREA FOR CHILDREN IS ITS ROLE AS A MEETING PLACE, A PLACE WHERE CHILDREN MAY GO TO SEE WHAT'S HAPPENING, TO MEET FRIENDS, OR TO JUST HANG AROUND UNTIL THERE IS SOMETHING BETTER TO DO (SEE PLAY AREAS AS CHILDREN'S LANDMARKS.) THE MORE VARIETY THERE IS IN PLAY OPPORTUNITIES, THE MORE A PLAY AREA WILL APPEAL TO CHILDREN FOR THESE PURPOSES.

WITH REGARD TO THE DIFFERENT TYPES OF ACTIVITIES TO BE PLANNED AND DESIGNED FOR, SCHOOLS AND CHILD-CARE CENTERS OFTEN REQUEST OPPORTUNITIES FOR A BALANCE BETWEEN STRUCTURED ACTIVITIES (LIKE KICKBALL) AND UNSTRUCTURED ACTIVITIES (LIKE FANTASY GAMES).

A NEW AND EXCITING RESPONSE TO THESE NEEDS IS THE COMPREHENSIVE PLAYGROUND, ALSO CALLED A PLAY PARK, WHICH IS AN ACTIVE AND COMPARATIVELY NEW TYPE OF PARK WHICH IS BEST KNOWN IN THE SCANDINAVIAN COUNTRIES AND SWITZERLAND (SEE BENGTSSON, 1970; LEDERMANN & TRASCHER, 1968). IN ESSENCE, A COMPREHENSIVE PLAYGROUND IS A CENTRALIZED, AGGREGATED, SPATIALLY-INTERCONNECTED SET OF PLAY SPACES. IT IS ANALOGOUS
to a NETWORK OF PLAY, which is a decentralized, disaggregated, linearly-linked series of play experiences.

Arvid Bengtsson is a famous Swedish planner and landscape architect who has written extensively and engagingly about COMPREHENSIVE PLAYGROUNDS. He says:

The Comprehensive Playground or play park . . . should contain layouts for different age groups, i.e., not only for children and adults, but for the age groups in between for which we often fail to provide in traditional parks. In such a play park, tennis courts and courts for other ball games— they could be of the simplest kind—are just as essential as swings and sandpits; and resting places for the aged are no less important than layouts for active pursuits. (Bengtsson, 1970, p. 110)

PRINCIPLE

COMPREHENSIVE PLAYGROUNDS

IN THE CONTEXT OF AN OVERALL MASTER PLAN FOR NEIGHBORHOOD-BASED PLAY, CREATE BOTH NETWORKS OF PLAY AS NODES OF HIGH ACTIVITY, AND CREATE COMPREHENSIVE PLAYGROUNDS AS SUPER-NODES OF INTEGRATIVE ACTIVITY APPEALING TO ADULTS AND CHILDREN ALIKE. THE COMPREHENSIVE PLAYGROUND IS A LOCAL AMENITY WHICH SHOULD ACT AS THE CENTER OF A NEIGHBORHOOD.

RECOMMENDATIONS

- The site of a comprehensive playground is normally based on a population of between 3,000 and 5,000.
- Investigations carried out in Stockholm have shown that the walking distance from a COMPREHENSIVE PLAYGROUND to home should not exceed 400 meters (440 yards) (Bengtsson, 1970). Factors which influence the size of the catchment area include, however, the topography of the landscape and a convenient link with other children's activity areas (schools, recreation centers, and shops).
- Recommended size is approximately 15,000 square meters (about 4 acres) (Bengtsson, 1970). With larger sizes, the chance of giving the layout a more park-like character increases because grass areas must be relatively large in order to resist wear. If size is restricted, relatively more hard surfaces should be planned.

- As it is essential to have short walking distances to the playground and a central position, economizing on space and trying to get as much as possible into the restricted area is often necessary.

- Create opportunities for structured play and unstructured play, for active pursuits, social interaction and quiet pursuits, and zone appropriately (see SEPARATE BUT LINKED ZONES; LOOPEED CIRCULATION; OPEN GRASSY PLAY AREAS; NESTS FOR QUIET PLAY).

- Create opportunities for all age groups (see "CHILDREN ONLY" AND MULTIPLE AGE GROUP PLAY TERRITORIES)

- Create a series of "rooms" defined by boards, hedges, or berms. Each section should be conceived of in terms of a different type of activity, while at the same time retaining within the framework of the "room" the greatest possible flexibility. The aim is to create a rich variety of environments from which to choose (NETWORK OF PLAY), while zoning them such that highly active activities don't interfere with more quiet activities (see SEPARATED BUT LINKED ZONES).

- A meeting place should be strategically positioned at the center of events.

RELATED ITEMS

- NEIGHBORHOOD-BASED PLAY
- NETWORK OF PLAY
- SEPARATE BUT LINKED ZONES
- LOOPEED CIRCULATION
- OPEN GRASSY PLAY FIELDS
- NESTS FOR QUIET PLAY
- "CHILDREN ONLY" AND MULTIPLE AGE GROUP PLAY TERRITORIES
- PLAY AREAS AS LANDMARKS
PLANNING OF PLAY AREAS SHOULD INCLUDE THE YEAR-ROUND USE OF SUCH AREAS.

In choosing play area locations, climate must be considered. The creation of favorable microclimates will have a positive influence on the amount of play areas.

Rutledge (1971) has made the following list of some of the climatic factors to be considered:

- temperature (air and water), especially day, night, and seasonal norms, extremes, and their durations
- Sun angles at various seasons and times of day.
- Predictable wind directions and intensities as they occur daily and seasonally.
- Precipitation: rain, snow, and sleet; seasons and accumulations; storm frequencies and intensities.

Microclimates are places which deviate from the general climate on a regular basis—they can vary by being colder or warmer. In winter we seek warmer microclimates: the south-side, protected terrace of a ski lodge. In summer we seek cooler microclimates: a shaded and cool picnic area on the north side of a hill. Microclimates can be a few hundred square feet in size, or they can be whole neighborhoods or even protected mountain valleys.
The two main factors which must be designed for are wind and sun. In a microclimate which is warmer than the surrounding areas, prevailing cold winds are blocked and the sun is captured in a sun pocket.

In a microclimate which is cooler than the surrounding areas, hot gusty winds are blocked and (if possible) cooling breezes are admitted and the area is shaded from the sun.

Areas such as these can be natural as well as designed; sun pockets can be found in warm meadows in a forest; frost pockets can be found in low places which are protected from the warm winds which melt higher surrounding areas.
As mentioned before, the two most critical factors in creating a pleasant microclimate are wind protection and sun-shade mixture.

Children may not always be conscious of the reason why they sometimes find it unpleasant outside and prefer to stay at home, but we know from investigations carried out that wind has a very great influence on this, especially if combined with low temperatures. (Bengtsson, 1974, p. 37)

Since wind problems may be exaggerated rather than relieved by existing buildings, this is an especially tricky problem.

Sun-shade mixture must be considered from several standpoints. (The requirements for sunshine will change with latitude, season and climatic zone.) In warm climates, shade is obviously necessary as protection from too-strong sunlight. Further, asphalt, concrete, and sand areas must have at least partial shade to be bearable in hot weather.

In colder climates a sun-shade mixture in summer with full sun in winter is desirable. In Alexander, Ishikawa, and Silverstein (1977), evidence is cited showing that people in general avoid using areas on the north sides of buildings. Shadows from existing buildings should be plotted at their worst (Dec. 21 in the northern hemisphere) and play areas placed outside these shadows.

Other microclimate considerations include vegetation and open water. Vegetation can affect wind patterns on a site and will also affect sun-shade balance. Further vegetation can provide significant cooling through evaporation.

Open water will also cool through evaporation and radiation in summer, and can, if large enough, warm the air in winter.

PRINCIPLE

FAVORABLE MICROCLIMATES

CREATE FAVORABLE MICROCLIMATES WHEREVER A CHILDREN'S PLAY AREA IS INTENDED. PROTECT THE AREA FROM PREVAILING WINTER WINDS AND FROM THE EXTREME SUMMER SUNS, WHILE ALLOWING WINTER SUN TO PENETRATE.
RECOMMENDATIONS

- In site selection, identify positive microclimates: study wind directions, sun angles, and shade conditions year round.

- Do not site play areas where buildings will shade them at any season of the year.

- Evaluate varied topography and existing vegetation as possible microclimate assets when choosing sites.

- Funnel and direct cooling summer breezes.

- Design for the dominant negative wind pattern (hot or cold).

- Create play areas with sun pockets and shady areas in both cold and hot climates.

- In temperate and cold climates use deciduous trees to provide shade so they won't block sun in winter and early spring.

- Provide good drainage after precipitation in order to make the play area more usable.

- Use earthforms, dense evergreens, and existing buildings as windbreaks on the side of the play area facing prevailing negative winds (hot, gusty, or cold).

- Place surfacing materials so that heat collectors (asphalt, sand, concrete, etc.) will not be in direct mid-day sun in hot weather.
ISSUE
ACCESS TO PLAY AREAS CAN BE DANGEROUS IF IT CROSSES MAJOR VEHICULAR CIRCULATION OR IS INTERFERED WITH BY MAINTENANCE AND DELIVERY EQUIPMENT.

JUSTIFICA,TION
Play spaces should be located so that preschool children do not need to cross a street to play at their local playground. In the case of school-age children, the need to cross vehicular traffic to get to the playground should be minimized. Children should be able to identify the entrance easily and should be able to enter without difficulty.

Another access problem is maintenance and delivery. Maintenance equipment (including snow removal vehicles where appropriate) must be able to get to and from (and around and within) the playspace easily (Bengtsson, 1970).

An access issue special to adventure playgrounds is that delivery vehicles must be able to bring in materials for kids' use (American Adventure Playground Association, n.d.).

In our earlier research, two facilities were identified which had excellent access conditions:

- Irvine Adventure Playground

  The site is a very strong feature of the Irvine Adventure Playground, and sets it apart from other adventure playgrounds in the country. No major thoroughfares have to be crossed for most children to reach it (radius - ca. 1 mile). (Travel Report, 1978, p. 130).

- St. Francis Square

  Defensible territory created by narrow openings from the street, grade changes from the street, and eyes on the interior open space.

  Variety of settings and landscape elements in the courtyards. The courts are rich in variety, while the peripheral parking lots and sidewalks are flat, featureless asphalt.
surfaces generally barren of interest for children. Other studies have shown that variety and duration of children's focused play is related to the variety of settings and landscape elements available—spaces, grade changes, plant materials, surface types, and site furniture. (Travel Report, 1978, pp. 152, 155)

PRINCIPLE

CONTROLLED ACCESS

ACCESS POINTS TO ANY PLAY SPACE SHOULD BE LIMITED, DELINIATED, AND CONTROLLED. PLAN ACCESS POINTS IN THE MOST PROTECTED AREAS (NEAR HOUSING, FAR FROM STREETS) SO THAT CHILDREN DO NOT HAVE TO CROSS STREETS. ACCESS FOR VEHICLES SHOULD NOT INTERFERE WITH CHILD ACCESS.

RECOMMENDATIONS

- Locate preschool play areas so children can reach them without crossing streets. Access should be nearest housing.
- Place access points where children can see them clearly from housing or from adult/older child activity areas.

- Provide only one or two access points with no through traffic path; enclose the rest of the perimeter with some type of barrier.

- Use fence materials, landscaping, plantings, earth berms, or some other method to enclose the play area and control access to and egress from play areas.

- Adventure play areas must be surrounded by a solid fence with two access points—one for people and one for delivery vehicles.

- Maintenance equipment should be able to enter the play area and move as necessary within it easily. Access for equipment should not interfere with child access.
Irvine Community Park and Adventure Playground
Irvine, California

St. Francis Square, San Francisco, California

RELATED ITEMS
VIEW TO AND FROM HOUSING
SEMI-ENCLOSED PLAYSACES FOR YOUNG CHILDREN
ADVENTURE PLAY AREAS
LANDSCAPED BARRIERS
FOR THE PARENTS' SENSE OF PSYCHOLOGICAL SECURITY, YOUNG CHILDREN NEED TO BE SEEN WHEN OUT OF DOORS. TODDLERS AND YOUNG PRESCHOOLERS EVEN MORE SO, NEED TO FEEL THAT THEIR PARENTS ARE WITHIN SHOUTING DISTANCE IF THE NEED ARISES.

Children need to feel enclosed, private, and secure in a play space (see SEMI-ENCLOSED PLAY SPACES FOR YOUNG CHILDREN). But small children also want to be able to see "home" from the playspace (Pollowy, 1977). Cooper (1975) found that parents want to be able to see their small children in the playspace, preferably from windows in the dwelling. If parents have a view from kitchen to playspace, this is most desirable.

A study by Holme and Massie (1970) showed that play areas within sight and sound of home are actually used by such a high percentage of children as to actually make such locations mandatory for small children's play areas.
Clare Cooper (1975) points out from her research the following:

Children in the active-group-play age range (c. 5-10) prefer to play in moderately sized, spatially enclosed outdoor areas, and supervising adults like to be able to oversee the whole of such an area from some place in the dwelling.

The maximum distance for recognizing and hailing someone is c. 70 feet; therefore the maximum dimension of the common open space should approximate this. Supervision by adults is facilitated if the space is roughly square or rectangular in shape; irregular shapes, fragmented open space, or multiple exits makes supervision difficult. For purposes of children's safety, it is preferable that the open space be directly accessible from the dwelling; it is generally unsatisfactory if the communal space is separated from the dwellings it serves by access roads or parking facilities. (p.

Views and the general coming and going of adults and kids to the housing affects the use of play space. Hidden play areas aren't used as much as those which are "a part of the action" and life of a community. Cooper found this to be true both in her own research and in the research of others. She recommends:

A variety of orientations should be provided, since people vary in their need for local contacts. For example, dwellings facing onto a street may experience less neighboring than those facing onto a shared pedestrian-oriented facility. The more traffic there is on the street, the less the degree of neighboring and sense of community on the block. (p.
PLAY AREAS SHOULD BE PLACED TO MAXIMIZE VIEWS BETWEEN THEM AND SURROUNDING HOUSING. PLAY AREAS FOR YOUNG PRESCHOOLERS SHOULD BE WITHIN 70 FEET OF THE CHILD'S FRONT DOOR.

1. Enclosures should be child scale (2-3 ft.) to allow parents to see into the playspace, and to allow the child to feel private and safe, but not lost.

2. Some parts of the play area should be raised above barrier height (e.g., mounds, climbing apparatus, etc.) to allow children a view of home.

3. No high, continuous, opaque barriers should be placed between housing and play area which would block sightlines between them.

4. Designers should consider placing larger structures, etc., at the edge of the playspace furthest from housing.

5. When planning and designing housing, evidence from around the world indicates that where children are to live, and be allowed by parents to use the public out-of-doors, no housing should be above three stories, and there should be walk-ups with direct visual and circulation access to adjacent play areas.
507 PROXIMITY OF PLAY AREAS

ISSUE

WITHIN A PLAY SPACE THERE ARE VARIOUS PLAY ACTIVITIES WHICH HAVE THE POTENTIAL TO COMPLEMENT OR CONFLICT WITH OTHER ACTIVITIES. FOR EXAMPLE, A SPORTS AREA COULD CONFLICT WITH SAND PLAY OR COULD COMPLEMENT A BALL PLAY AND WHEEL TOY AREA.

JUSTIFICATION

When planning a play area, the designer should begin with a clear idea of the relationships between various activity areas. These relationships will begin to suggest some zoning strategies which in turn are affected by other zoning considerations discussed in SEPARATED BUT LINKED ZONES. Each activity identified in this document will be listed and proximity considerations will be discussed.

DESIGNATED PLAY STRUCTURES

This area would be both active and passive, and would include dramatic and fantasy play, large muscle activity, and RETREAT AND BREAKAWAY POINTS. For safety, the large muscle activity areas should not be located too close to any other play activity.

CREATIVE PLAY AREAS

These areas will include SMALL ARTS AND CRAFTS NOOKS, and manufactured LOOSE PARTS for building. Materials which can be used for arts and crafts include water, sand, plants, and other natural products of ENVIRONMENTAL YARDS (e.g., seeds, flowers, pine cones, sticks, twigs, etc.).

BERMS AS PLAY EQUIPMENT

Berms support some large muscle play and therefore can be integrated with DESIGNATED PLAY STRUCTURES. Berms must also have free space at the bottom for sliding in summer and winter. Therefore, for safety, a slope with adjoining flat area should be separated from other activities. Slopes may also be needed for INFORMAL PAVED AREAS; berms can fulfill this need.
ENVIRONMENTAL YARDS

Natural play elements such as PROTECTED SAND AND DIRT PLAY AREAS; FENCED ANIMAL AREAS; CHILDREN'S GARDENS; and SUPERVISED FIRE AND COOKING AREAS all have obvious connections to ENVIRONMENTAL YARDS. These elements should be together so that ecological relationships can be seen (e.g., animals fed with wild grasses, watering plants, using sand and dirt as a growing medium, using fire to cook garden vegetables with wild herbs, etc.)

Separate areas such as INFORMAL PAVED AREAS and HARD-SURFACE PLAYING AREAS from plant and animal areas; these activities could disturb animals and be dangerous to plants.

WATER PLAY AREAS

Since water is a natural attractor of people, proximity to adult seating areas would be appropriate. Water is also useful for SMALL ARTS AND CRAFTS NOOKS; PROTECTED SAND/DIRT PLAY AREAS; CHILDREN'S GARDENS; and FENCED ANIMAL AREAS.

NESTS FOR QUIET PLAY

These nests can be located anywhere as long as they are protected from intrusion by surrounding activities. Visual connections for watching as a play activity should be designed in conjunction with high use areas (e.g., sand, water, play structures, etc.). Natural "nests" will exist in ENVIRONMENTAL YARDS and will be made by children in ADVENTURE PLAY AREAS.

RETREAT AND BREAKAWAY

The need for retreat and breakaway points will be greatest in the most active areas, specifically DESIGNATED PLAY STRUCTURES, CREATIVE PLAY AREAS, HARD-SURFACE PLAYING AREAS; INFORMAL PLAY AREAS and related activities. Less-physically challenging areas will need fewer retreat and breakaway points.

FENCED ANIMAL AREAS

Quieter spaces are necessary for animal well-being. Separation from noisy, active areas are necessary. Proximity to natural
environment—PROTECTED SAND/DIRT PLAY AREAS; WATER PLAY AREAS; CHILDREN'S GARDENS; and ENVIRONMENTAL YARDS—would be appropriate. Animals can also be part of ADVENTURE PLAY AREAS. If this is the case, they should have their own quiet corner farthest from construction activities.

CHILDREN'S GARDENS

Natural connections exist to FENCED ANIMAL AREAS; WATER PLAY AREAS; PROTECTED SAND/DIRT PLAY AREAS; SUPERVISED FIRE AND COOKING AREA; and ENVIRONMENTAL YARDS. Protection from very active areas is necessary.

PROTECTED SAND AND DIRT PLAY AREAS

Sand and dirt play is almost universal. These elements are necessary for CREATIVE PLAY AREAS; SMALL ARTS AND CRAFTS NOOKS; CHILDREN'S GARDENS; FENCED ANIMAL AREAS; ADVENTURE PLAY AREAS; and ENVIRONMENTAL YARDS.

For safety, sand and dirt play areas should be separated from DESIGNATED PLAY STRUCTURES; INFORMAL PAVED AREAS; OPEN GRASSY PLAY AREAS; and HARD-SURFACE PLAYING AREAS.

ADVENTURE PLAY AREAS

Because of the fence requirement, ADVENTURE PLAY AREAS ARE AUTOMATICALLY SEPARATE FROM other play areas. However, within the fence many areas may exist: construction and building; PROTECTED SAND/DIRT AREAS; WATER PLAY AREAS; FENCED ANIMAL AREAS; CHILDREN'S GARDENS; SUPERVISED FIRE AND COOKING AREAS; and SMALL ARTS AND CRAFTS NOOKS. Links beyond the fence with INFORMAL PAVED AREAS; ENVIRONMENTAL YARDS; OPEN GRASSY PLAY AREAS; and HARD-SURFACE PLAYING AREAS are recommended.

SUPERVISED FIRE AND COOKING AREA

Proximity to CHILDREN'S GARDENS; ENVIRONMENTAL YARDS; and WATER PLAY AREAS has been mentioned. ADVENTURE PLAY AREAS need fire areas in which trash that is no longer useable can be burned.
SMALL ARTS AND CRAFTS NOOKS

Proximity to PROTECTED SAND/DIRT PLAY AREAS; WATER PLAY AREAS; and ENVIRONMENTAL YARDS has been mentioned. The need for DEGREES OF SHELTER and OUTDOOR STORAGE is also evident.

OPEN GRASSY PLAY AREAS
HARD-SURFACE PLAYING AREAS

Physical separation of these sports areas from other play areas is necessary for safety. But visual links for older child-younger child connections, and "nests" for watching children or for RETREAT AND BREAKAWAY are necessary. HARD-SURFACE PLAYING AREAS (e.g., basketball courts) may be linked to INFORMAL PAVED AREAS.

SNOW AND ICE PLAY TRANSFORMATIONS

These will overrun areas used for other thin activities in warmer seasons: BERMS AS PLAY EQUIPMENT for winter sliding; WATER PLAY AREAS for winter skating; OPEN GRASSY PLAY AREAS for snow building, snow fights, and snow games.

INFORMAL PAVED AREAS

Visual connection with the street and physical separation of INFORMAL PAVED AREAS from the actual street which cars drive on is necessary.

Some double-functioning of LOOPED CIRCULATION space and INFORMAL PAVED AREAS is possible. INFORMAL PAVED AREAS may be linked to other physically active areas: DESIGNATED PLAY STRUCTURES; OPEN GRASSY PLAY AREAS; HARD-SURFACE PLAYING AREAS. Some NESTS FOR QUIET PLAY should overlook INFORMAL PAVED AREAS since watching is an important part of this aspect of play.
PATTERN

PROXIMITY OF PLAY AREAS

THOSE ACTIVITIES WHICH ARE COMPATIBLE SHOULD
BE CLOSE TOGETHER WITH EASY CROSS-ACCESS.
THOSE WHICH ARE INCOMPATIBLE MUST BE PHYSICALLY
IF NOT VISUALLY SEPARATED.

RECOMMENDATIONS

- See Matrix for summary of recommended
  relationships between various play areas.

PROXIMITY OF PLAY AREAS

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: COMPATIBLE
: INCOMPATIBLE
- NOT AN ISSUE

RELATED ITEMS

NETWORK OF PLAY

COMPREHENSIVE PLAYGROUNDS
SEPARATED BUT LINKED ZONES
CONTINUITY AND BRANCHING

507-5
FOR CLARITY AND SAFETY, CHILDREN SHOULD HAVE A CHOICE BETWEEN PLAY AREAS WHICH ARE ORGANIZED IN ACCORDANCE WITH ACTIVITY TYPES (ACTIVE-QUIET; STRUCTURED-UNSTRUCTURED) AND DEVELOPMENTAL LEVELS (YOUNGER APPEALING OLDER APPEALING).

JUSTIFICATION

In the NETWORK OF PLAY, each particular play-space has various zones for active play, quiet play, different user groups.

Children develop in various stages acquiring different levels of competence at each stage of development. For example, eighteen-month-old children generally are very egocentric in their play, whereas four-year-old children are much more social. As the eighteen-month-old is learning to coordinate balance and movement, the four-year-old is refining motor skills such as running and jumping (Ilg and Ames, 1974). Therefore, developmental stages have varying skills which require different environments.

Children have different space requirements depending upon the size of a group. A large space can be frightening to a single child, but crowded for a group of ten. Research indicates that separation of different activities reduces the potential for conflict between play areas (Sierens, 1969). It is necessary to note that the separation of areas
also provides an element of safety for smaller children who would be able to locate away from older children's play areas.

As has been noted in discussions of size and scale (see RANGE OF SOCIAL SCALE), smaller groupings of children are best for development (Travers and Ruopp, 1978). In "The Effects of Spatial Density on Behavior Styles of Children," Chalsa Loo (1977) found:

There was more aggression or less positive social overtures in the high density condition than in the low density condition. (p. 59)

Smith and Connolly (n.d.) agreed that higher density increased aggressive behavior. Schneekloth (1975) discovered that the spatial distribution of objects markedly structured the use of space by children. Children tended to group themselves around pieces of large equipment. Schneekloth further found that the presence of manipulables decreased use of large equipment. Children using large equipment were usually in groups of more than two and those using manipulables played in pairs (or alone).

The combination of these results indicate the following:

- In zoning large-muscle activity equipment and small-muscle manipulative play, different-size groups must be allowed for.

- In all zoning, heavy-use activity areas should not be allowed to "pile up" densities which will be detrimental to the child's social development.

From observations of children's behavior in the play areas visited in this project (see Travel Report, 1978), the following findings emerge:

- Play yards based on developmental level are necessary for children because activities for different developmental levels can conflict.
- Use varies according to age and stage in the life cycle. At Ontario Place there were bigger and smaller versions of most of the equipment to facilitate a self-selection gradient for children with different abilities.

- Children of different ages and levels of ability should be able to interact with each other.

- Clear delimitations of activity areas facilitate the ordering and organization of stimuli as well as the choice of activities.

In order to accomplish zoning of activity areas while at the same time providing links between activities at various developmental levels, a combination of concentric circles and wedges might be an appropriate design approach.

Other items in this guide contribute directly to this pattern:

**PROXIMITY OF PLAY AREAS**

- Play for adults and play for older children should coordinate with play for small children.

- For safety, very active spaces should not impinge on quiet play (e.g., swinging rope and sand play).

**"CHILDREN ONLY" AND MULTIPLE AGE GROUP PLAY TERRITORIES**

- Adults or older children supervising young children need space which is comfortable for them, while still keeping visual lines open between child and caretaker.

**RETREAT AND BREAKAWAY POINTS**

- Children involved in active play may need to retreat periodically when stress or group pressure become too much.

**LOOVED CIRCULATION**

- Looping circulation with no direct circulation through activity spaces is best.
PRINCIPLE

Methods of zoning

- Linked

  convenient but not
  next to it

- Separated

  barrier of
distance
landform
path
etc

- Contiguous

  each area is
defined but
immediately
connected
to the other

SEPARATED AND LINKED ZONES

CREATE PLAY WORLDS VARYING IN SPACE, SIZE, AND LOCATION WHICH GIVE THE CHILD A CHOICE OF PLAY AREAS. ZONE ACTIVE TO QUIET AREAS; SEPARATE STRUCTURED ACTIVITIES (KICKBALL) FROM UNSTRUCTURED ACTIVITIES (QUIET NODES); AND DEFINE ZONES WHICH WILL APPEAL TO YOUNGER VERSUS OLDER CHILDREN. ENSURE, HOWEVER, THAT ALL THESE AREAS AND ZONES ARE INTERCONNECTED SO THAT CHILDREN CAN SEE FROM ONE TO THE OTHER AND CAN MOVE FREELY FROM ONE TO THE OTHER.

RECOMMENDATIONS

- Use concentric zones to separate activities from most quiet at the center to most active at the perimeter. Use wedges to divide the circles into activities which are most appropriate to children at various developmental levels.

- Make the circles progress in PACED ALTERNATIVES, and make cross-over easy from wedge to wedge and from circle to circle.
• Size of groups for various activities/range of social scale:
  - retreat (one or two ea.)
  - small muscle manipulables (2 to 4 ea)
  - large muscle equipment play (max 10 ea)

• Identify zones by developmental goals:
  - cognitive
  - social
  - large muscle
  - small muscle

• Plan all sub-zones to accommodate small groups (1-10 children).

• Identify zones by developmental goals rather than age groups, with links between developmental levels.

• Plan spaces for a RANGE OF SOCIAL SCLAE:
  - quiet retreat for one or two; small muscle manipulables for two to four children; large muscle equipment for up to 10.

• Identify and separate quiet and active areas physically, but make crossover easy to accomplish (links).

• Provide circulation which can follow the circle-wedge pattern and help provide separation for safety.

• Identify and separate zones by user groups only when necessary (e.g., adults who only want to observe children, not play with them).
RELATED ITEMS

CONTROLLED ACCESS
PROXIMITY OF PLAY AREAS
LOOPED CIRCULATION
SEMI-ENCLOSED PLAY SPACES FOR YOUNG CHILDREN
RANGE OF SOCIAL SCALE
"CHILDREN ONLY" AND MULTIPLE AGE GROUP PLAY TERRITORIES
RETREAT AND BREAKAWAY POINTS
NETWORK OF PLAY
### ISSUE

YOUNG CHILDREN PREFER SPACES THAT FEEL SAFE, PROTECTED, AND AT LEAST PARTIALLY ENCLOSED.

### JUSTIFICATION

Parents of very young children feel more secure having their children enclosed and protected. Various sources, like Lady Allen of Hurtwood (1968, p. 31), and Anne-Marie Pollowy (1977) agree that young children also prefer the sense of security and calm attained by a sense of enclosure. If play spaces for preschoolers are enclosed, and are within view of dwellings, parents will feel free to leave their children there to play, without the need for constant supervision (Cooper, 1975).

Physically containing the play space with some form of low enclosure serves to define and protect the preschool area from the activities taking place around it. Enclosing the play area also simplifies the task of supervision as it discourages little ones from wandering off in all directions (Central Mortgage and Housing Corporation, 1978, p. 19).

The counterprevailing tendency, without which we would have complete justification for recommending totally enclosed and separated play spaces for different ages and different types of activities, is that children learn a tremendous amount from observation. A young child will watch an older child and then will imitate the behavior seen, or may go over to where the older child was playing and try the same thing. Conversely, older children also learn from helping younger brothers and sisters, or friends, to accomplish new tasks. Children therefore need to be able to watch each other, to join the activities of others as desires dictate, and generally to be free to roam from activity to activity and from age group to age group (see Mary B. Connally Children's Playground, Travel Report, 1978, p. 141).
PATTERN

SEMI-ENCLOSED PLAY SPACES FOR YOUNG CHILDREN

USE ENCLOSED ELEMENTS AT CHILD HEIGHT TO GIVE CHILDREN A SENSE OF ENCLOSURE AND TO PROTECT PRESCHOOL-AGE CHILDREN FROM THE BOISTEROUS ACTIVITIES OF OLDER CHILDREN, WITHOUT BLOCKING PARENTS' VIEWS INTO THE PLAY SPACE.

RECOMMENDATIONS

- Surround preschool play areas with multiple enclosing elements to ensure a partial sense of enclosure and security, but not isolation, from surrounding activities.

- Provide enclosing elements which are child-size, 2-2.5 ft. high, and which do not block views.
elements of enclosure used in layers

prime activity

circulation

seating

terras

fence

RELATED ITEMS

CIRCLES AND WEDGES
DEVELOPMENTALLY-APPROPRIATE PLAY SPACES FOR INFANTS
LOODED CIRCULATION
VIEWS TO AND FROM PLAY AREA
SEPARATED BUT LINKED ZONES
ISSUE

A CRITICAL FACTOR IN THE ORGANIZATION OF THE PLAY SPACE IS CIRCULATION WITHIN THE PLAY SPACE.

JUSTIFICATION

Many factors from other patterns will influence site design relative to circulation:

- Once inside, small children should be kept inside the play area for safety.

- For safety in activity spaces, through traffic (i.e., older kids on bikes) should be discouraged.

- Maintenance equipment should be able to get into and through the space as necessary (Central Mortgage and Housing Corporation, 1978).

- Small children should be able to progress from activity to activity within the play space safely and easily.

- Circulation should encourage a developmental progression through paced alternatives (i.e., from one play area to the next level of difficulty should be clear--a small slide may lead to a larger slide, etc.).

- Circulation should help prevent dangerous mixing of activities. Children who are jumping, swinging, sliding, etc. should not interfere with children playing in the sand. The National Committee for Safety on Fixed Equipment Playgrounds, in a checklist, asks, "Are the swings sited to deter children from running in their path?" This question might be repeated for every active area which could possibly be dangerous to children passing by.

- Some circulation may double-function as places for STREET PLAY (e.g., Central Park Playgrounds, Travel Report, 1978, p. 86).

   I. The core--the main activity area.

   II. A hard-surfaced path--for circulation and wheeled toys.

   III. The outer ring fence and benches--boundary control and a place for adults, rest and observation.
Other examples of successful access and circulation designs are the following:

- Pacific Oaks:

  *Shady Lane is one of the most effective organizational features of this School. Multiple-functioning as circulation, entry/transition area, and meeting and talking area for parents and staff, it also provides an ideal activity space for trikes and wagons.* (Travel Report, 1978, p. 334)

- From a description in *A Playground for All Children*:

  *Many of the designs submitted had, in addition to the other major circulation routes within the playground, an outer ring pathway that connected the various activities and aided in orientation.* (U.S. Department of Housing and Urban Development, 1978, Book 3, p. 92)

- Washington Environmental Yard:

  *The looping circulation assures no dead ends where children might plow into fragile vegetation. It also provides natural edges to help differentiate the three major eco-systems—chaparral hills, woodlands, and water marshlands—and variations.* (Travel Report, 1978, p. 165)

- Mary B. Connolly Children's Playground:

  *Play areas with developmentally-appropriate, challenging things to do seem to lead to a natural self-selectivity of the child to his or her own level, and if properly separated by space and subtle material and level changes (sand to asphalt path, back to asphalt) don't seem to need fences or other arbitrary devices to keep children apart. On the contrary, this allows freer mixing of children of different ages and the freedom for a child to move from area to area as challenge or mood move him or her.* (Travel Report, 1978, p. 141)
PRINCIPLE

LOOPED CIRCULATION

WITHIN THE PLAYSPACE, CIRCULATION SHOULD BE LOOPING AND USED TO DEFINE ZONES OF ACTIVITY.

RECOMMENDATIONS

- Use looping circulation with no long straight stretches of path to tempt children to run too fast for safety.
- Allow all activity areas to be visible from circulation so children can easily see to choose where they want to go.
- Secondary circulation between activities should clearly lead in a sequence of graded challenges whenever possible.

- Let main circulation be clearly separated from activity areas, possibly by dead-end branches from major path.
- Allow major circulation to widen where necessary to double-function as STREET PLAY space.

RELATED ITEMS:

CIRCLES AND WEDGES
PROXIMITY
CHALLENGE WITHOUT UNDUE RISK
CONTROLLED ACCESS
CONTINUITY AND BRANCHING
ISSUE

ACTIVITIES WHICH DEAD END OR OPEN ONTO AN UNDEFINED PLAY AREA DIMINISH THE CHILD’S LEVEL OF MOTOR ACTIVITY, INTENSITY, DECISION-MAKING OPPORTUNITIES, AND ATTENTION SPAN. FOR EXAMPLE, ONCE REACHING THE BOTTOM OF A TRADITIONAL SLIDE, THERE IS USUALLY NO OBVIOUS OR DIRECT CONNECTION TO OTHER PLAY ACTIVITIES OTHER THAN GOING BACK UP THE SLIDE AND SLIDING DOWN AGAIN.

JUSTIFICATION

Young children have more difficulty with sequencing and are more easily distracted by surrounding elements of the environment (Millar, 1968). As children become older, they become more selective of elements of the environment to which they choose to respond.

Cherry (1976) recommends encouraging movement from activity to activity by limiting the amount of space devoted to any one activity (p. 20).

John Holt suggests that paths from activity to activity become parts of play as well. Catwalks entice children to use them as playspace as well as circulation (in David and Wright, 1974, p. 143).

When a child has come to the end of one activity or a cycle of activities, there should be immediately and obviously a choice of continuing options. Providing this can enhance the following:

- motor activity
- free play
- exploration
- discovery
- attention span
- decision making
- spatial awareness

PRINCIPLE

CONTINUITY AND BRANCING

THE ENVIRONMENT SHOULD ALLOW FOR ACTIVITIES TO FLOW AND MOVE ACTIVELY AND CONTINUOUSLY WITH MULTIPLE BRANCHES AND ALTERNATIVES AT CROSSROADS AND DECISION POINTS.
RECOMMENDATIONS

- The child should be able to see and understand the parts as well as the whole.

- The child should be able to see alternative directions and activities once terminating an activity.

- The child should be able to withdraw into his or her own private world when he or she wishes to.

- Activities and attention span should be controlled by using intentional divisions or barriers.

- Activity areas, connections, and links should be clearly defined and understandable (Moore, Cohen and Team 699, 1977).

- Branching should happen horizontally, vertically, and in a combination of directions (Shaw, n.d.).
ISSUE

CHILDREN ENJOY OUTDOOR EXPERIENCES DESPITE SEASONAL WEATHER VARIATIONS. PHYSICAL PROTECTION FROM BAD WEATHER CONDITIONS CAN EXTEND THEIR OUTDOOR PLAY SEASON.

JUSTIFICATION

"Playgrounds are often too open, windy, and disagreeable," (Bengtsson, 1970, p.

The outdoor area offers a wealth of opportunities for children to learn and grow. It is a natural environment controlled by the sun, rain, wind, and snow. However, weather conditions should not hinder children's outdoor experiences nor inhibit them from exploring their natural environment. Children can be clothed for almost any temperature extremes for outdoor play. Even if the play period is shortened during very cold or bad weather, the benefits of outdoor play remain.

Although children should be in contact with the outside as much as possible, they need protection from adverse weather conditions such as rain, wind, and cold. This protection should serve as a screen or filter which excludes the bad weather conditions and admits the desired ones.
Britain and other European countries have long recognized the value of sheltered outdoor play in all seasons (Bengtsson, 1970; Utzinger, 1970; Lady Allen, 1968). Utzinger (1970), after studying many European nursery schools and playgrounds, recommends:

A transitional space from outdoors to indoors should be provided. This could be a covered play area immediately adjoining the playroom areas which will protect youngsters from hot sun, snow, rain, and wind, but allow them to play outside. (p. 78)

The microclimate of outdoor areas can also be utilized to enhance year-round outdoor play possibilities. Cohen (1974) has made some suggestions about the use of trees and overhangs to serve as protective shelter for both extremes of weather; users should have shade during the summer and sun during the winter. Deciduous trees are an often used filter, providing shade during summer and sunlight when their leaves fall in winter. Coniferous trees serve as a barrier from cold, strong winds. A degree of enclosure also creates a feeling of protection. Overhangs and awnings can be used as protective roofs and walls on two sides to provide shelter to an area from heavy winds.

Besides the need for shelter from wind, rain, snow, sun, etc., there are also certain activities which seem to require some shelter, but are more outdoor than indoor activities.

These may include carpentry, finger painting, animal play, plant tending, loud music play, etc. For these types of activities Osmon (1971) recommends "semi-shelter" which encloses an area only when needed.

Another need for shelter exists where plants, animals, loose parts, and other perishable types of play equipment must be stored (e.g., props and costumes for dramatic play). It is important that these things be kept safe from adverse weather conditions and vandalism.
WHERE THERE IS ANY TYPE OF CHILDREN'S BUILDING (CHILD-CARE CENTER, ARTS AND CRAFTS CENTER, RECREATION CENTER, PLAYLEADER'S HUT), CREATE VARIOUS DEGREES OF SHELTERED PLAY AREAS WHERE CHILDREN CAN FREELY PLAY WHILE BEING PROTECTED FROM ADVERSE WEATHER. MAKE AT LEAST ONE SHELTERED AREA A TRANSITIONAL SPACE BETWEEN THE INSIDE AND OUTSIDE.

PROVIDE SUNNY AREAS, DRY SPOTS, SHADY AREAS, AND WIND BUFFERS.

RECOMMENDATIONS

- Outdoor sheltered space should be provided in some form at all appropriate play spaces.

- Where there is indoor space adjoining play areas (e.g. school playground), shelter should be transitional between indoor and outdoor space. This space may be "borrowed" from the building form.

- Covered or semi-covered verandas or porches or a deep, dry play area with a translucent roof and walls on one or two sides can make ideal transitional play areas.

- Use vegetation to admit the sun, to buffer winds in winter, and to provide shade during the summer.

- Overhangs and awnings can be used as partial shelter, especially when combined with walls or vegetation as wind buffers.

- Other forms of sheltered play space can be interspersed throughout outdoor play areas by using playsheds, walls, bushes, and trees as partial protection from winds, harsh sun, light rains and snows.

- All play structures should provide some shelter from rain and wind.
- Surfaces adjoining sheltered play should be quick drying (e.g., paving, brick, gravel, etc.) with slower drying surfaces farther away (grass, dirt, sand, etc.) (Osmon, 1971).

- In climates where cold, wet weather lasts several months, a closed, sheltered indoor playground might be considered. Several temporary winter playgrounds in the Scandinavian countries have been very successful (Bengtsson, 1970).

- Hut-type structures can be used to make weather-tight areas for children's play.

- In play areas where there are no adjoining indoor spaces, storage and play shelter should be combined so that playthings are available without leaving the shelter.

RELATED ITEMS

OUTDOOR STORAGE
FAVORABLE MICROCLIMATES
POSITIVE DRAINAGE

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