

# OUT OF THE CELLAR AND INTO THE PARLOUR

## Guidelines for the Adaptation of Residential Space for Young Children

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Drawings and designs by Joel Shack, Architect.

## PREFACE

The Children's Environments Advisory Service's Research and Development Program for the International Year of the Child has as its objective the advancement of good environmental planning and appropriate family housing design that supports the needs of children and youth (0-18).

An in-house CMHC IYC Committee, consisting of representatives of various CMHC divisions that impact on family housing and regional representatives, identified the gaps in the field. The committee selected projects of directed research to close these gaps and identify problem areas, to find solutions where possible, and to provide input to corporate policy and programs in the field of family housing. Five categories of investigation were selected to respond to these needs:

### ASSEMBLY/PRODUCTION OF DATA

To assemble a data bank on the condition of children in relation to their residential environment and to relate this data to data being collected by other departments and agencies.

### EVALUATION

To examine existing housing situation catering to the needs of families with children at home.

### DESIGN AND AWARENESS MATERIAL

To develop proposals for improving housing and the surrounding environment through design.

### DEMONSTRATION

To construct demonstration facilities for children, or to introduce improved facilities for children in on-going projects.

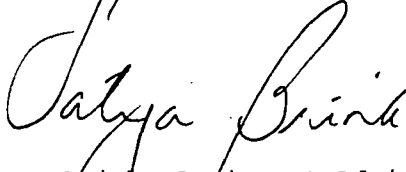
### DEVELOPMENT OF POLICY PROPOSALS

To review the condition of children in Canada, and present proposals to meet or correct emerging problems in relation to housing.

The CMHC IYC ommittee will develop for CMHC Management a policy paper based on the facts, figures and findings of the Research and Development Program for IYC, with implications for future policy, programs and research affecting family housing.

The Children's Environments Advisory Service plans to use the focus on children made possible by the Year of the Child to plan new directions for our service. We intend to conduct further research, provide additional resources and sustain the momentum of our advocacy role within CMHC.

This project is one of 21 projects (titles on last page) in the Research and Development Program for the International Year of the Child. These reports are distributed by the Children's Environments Advisory Service.



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OUT OF THE CELLAR AND INTO  
THE PARLOUR

ABSTRACT

Young children spend a considerable amount of time in the home setting--either in homes of their own or in homes of family day care providers. Most homes are poorly designed from the point of view of children's developmental needs. There is a need for improvement of housing design to meet the needs of young children. This report suggests a series of guidelines for the adaptation of the indoor and outdoor home environment to support children's play and learning activities. The guidelines are derived from two data bases: a review of literature and a survey of a sample of 25 homes.

The guidelines relate to the following areas: supervision of children; establishment of activity areas; accessibility of toys and equipment; personal space for children; and child safety. In addition to general discussion of adaptations for major living areas of the home, there are specific recommendations regarding kitchens, bedrooms, and outdoor areas.

The report presents two acceptable models for organizing a dwelling to accommodate children.

#### ABOUT THE AUTHORS

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TABLE OF CONTENTS	Page
PREFACE	iii
ACKNOWLEDGEMENTS	viii
INTRODUCTION	
CHAPTER ONE: SEEN AND HEARD: ADAPTING THE HOUSE FOR YOUNG CHILDREN	5
The Legacy of the Front Parlour	5
Summary of Guidelines	6
Family Day Care Guidelines	14
CHAPTER TWO: ADAPTING THE LIVING SPACES OF THE HOME FOR CHILDREN	17
Play Opportunities Throughout the House	19
Transforming the Living Spaces for Child Care	30
CHAPTER THREE: THE KITCHEN: AN UNTAPPED RESOURCE	39
CHAPTER FOUR: BEDROOMS FOR CHILDREN	47
As the Child Grows	47
Guidelines for Children's Bedrooms	50
Building for the Future	56
CHAPTER FIVE: OUTDOOR PLAY OPPORTUNITIES	57
Type of Outdoor Play Spaces	57
Outdoor Play Activities	65
CHAPTER SIX: DESIGN PROPOSALS FOR 'MODEL' HOMES	71
Guidelines for Planning Living Areas	75
REFERENCES	79
APPENDIX A: THE HOME SURVEY	A1
Objective	A1
Method	A1
Sample	A1
The Interview	A2
Characteristics of the Sample	A2
Findings	A3
APPENDIX B: THE CHILDREN'S ENVIRONMENTAL INVENTORY	B1
APPENDIX C: PROJECTS SUPPORTED BY CMHC AS PART OF THE RESEARCH AND DEVELOPMENT PROGRAM UNDERTAKEN BY THE CHILDREN'S ENVIRONMENTS ADVISORY SERVICE (CEAS) FOR THE INTERNATIONAL YEAR OF THE CHILD	C1

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Two teams of students conducted the survey interviews. The following students from the Early Childhood Education Program at Ryerson Polytechnical Institute conducted the interviews with parents and family day care providers: Cathy Kilpatrick; Cathy Polzin; Cindy Schacht; Gwen Schamerhorn; Cheryl Spence; and Naomi Tsuji. Dianne Carter from the Department of Early Childhood Education at Centennial College also conducted in-home interviews.

The following students from the Faculty of Architecture, University of Toronto, visited sampled homes, using photographs and sketches to document various features in the in-home environment: Thorsteinn Geirhardssen; Isa Hartke; Ron Huybrechts; Rose Mary Mason; Roy Matteo; and Brian G. Smith.

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Ruth Chantler typed many drafts of the final report, working with patience and with care. The research instruments were all typed by Barbara Woolley.

A final word of thanks is extended to the twenty-five respondents, who opened their homes to our investigators. Without their participation, this project would not have been possible.

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## INTRODUCTION

There is a need for improvement of housing design to meet the needs of young children. It is the purpose of the present project to suggest ways to utilize existing knowledge about child development in the design and adaptation of residential space. Before they enter school, children spend great amounts of time in the home setting--either in homes of their own or in homes of family day care providers. The home is where most early learning occurs. However, most homes are poorly designed from the point of view of children's developmental needs. Several studies using Canadian and Swedish data indicate that home environments severely limit children's opportunities for rich and varied program activities. (Gaunt, 1978; Johnson, 1978) However, there has been a lack of available material on design for residential space to support children's play and learning activities.

Cultural values determine the way in which living space in houses and apartments is allocated among the activities of children and adults. Contemporary housing designs are adult-oriented, and tend to ignore children. Kitchens, generally considered women's territory, have become small, functional spaces with an emphasis on food storage and preparation. A master bedroom, traditionally occupied by the head of the household, is the largest bedroom in the house and tends to be "off limits" for children. Children's rooms are often too small to permit active play. Living rooms tend to be showplaces from which children's play is banned. Dining rooms, located adjacent to kitchens are often underutilized in the normal, everyday activities of the family, reserved rather for special occasions. Children's needs are largely ignored in the traditional house plan.

There exists a substantial body of literature on the developmental needs of young children. Child development research findings have had extensive application in the design of physical environments for children. For the most part, however, it is only planners of children's institutional settings, such as schools, and day nurseries, that have translated research principles into physical terms. The planners of residential dwellings do not, as a rule, apply child development principles to their designs.

This study addresses the needs of children in two residential settings, the family home and the family day care home. This represents an innovative approach, as previous researchers have tended to focus attention on one or the other setting. Of the several researchers who have examined children's home environments, Anne-Marie Pollock (1977), and Louise Gaunt (1978) have dealt exclusively with the family home, while Elizabeth Prescott (1978) has limited her considerations to the family day care home. While there exists a set of common needs for both home and home day care settings, there are also some distinctive requirements for each.

The objective of this project has been to translate basic principles of child development into physical terms. To this end, the project has utilized an interdisciplinary team, including a sociologist, an architect, and a child development specialist.

The project has drawn upon two data bases: first, a review of relevant literature on children and their environment; second, a survey of a sample of homes. The literature review included sources from the fields of child development, day care and early childhood education, and architecture. In addition to reviewing published literature, the research team corresponded with numerous researchers in the field.

The survey consisted of a sample of twenty-five homes which were reputed to provide

excellent physical environments for young children. Approximately one-half of the sample consisted of homes of families with preschool age children; the other half were family day care homes. The sample of family day care homes was recruited through agencies providing supervised family day care; the remaining referrals came from a variety of sources including social and community agencies serving parents, as well as from local neighbourhood services.

Data collection consisted of a personal interview with a structured questionnaire (See Appendix). The questionnaire included an environmental inventory to document the location and frequency of occurrence of various activities in the indoor and outdoor home environments. The questionnaire also included various attitudinal items dealing with children's use of in-home space.

A summary of the survey results appears in the appendix. A floor plan was drawn for each of the survey homes, indicating usage of space by children and noting unique features in the house design. Interviews were supplemented by photographs and sketches of adaptations of the home for children's use.

The report uses ideas obtained from the literature review and the survey of homes to suggest a variety of alternatives to the traditional notions of house design. By altering the pattern of allocation of interior household space, it is possible to create environments which support children's activities, without sacrificing adult-oriented activities within the home. The result of the research is a set of guidelines for the design and adaptation of homes to meet the needs of young children between the ages of 2 and 6 years. The guidelines explore the potential of the rooms of the home in some detail including: size of rooms; windows and lighting; flooring and wall surfaces; storage facilities; furnishings and equipment; and utilization of outdoor residential space.

## Chapter One

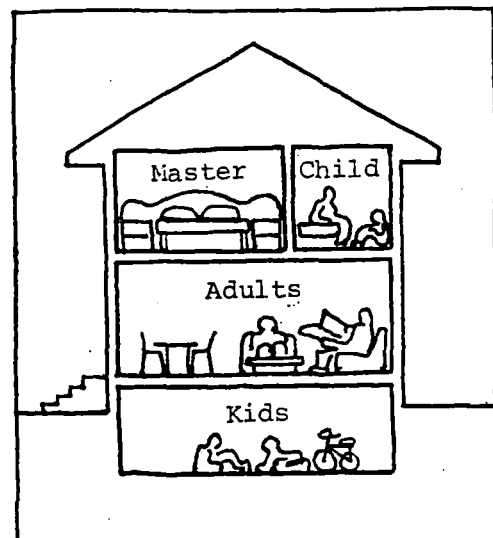
### SEEN AND HEARD: ADAPTING THE HOUSE FOR YOUNG CHILDREN

1

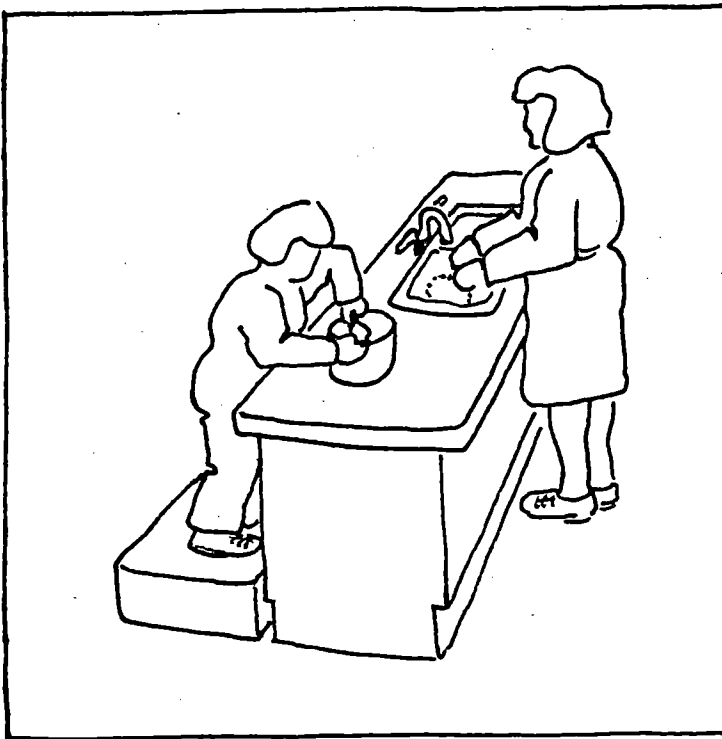
#### THE LEGACY OF THE FRONT PARLOUR

The design of a home reflects basic cultural values. Examination of housing design in this society suggests that young children are not highly valued. In fact, the arrangement of our homes rarely accommodates the needs of young children. Toys and play materials, the "tools" of the young, are generally considered out-of-place in the main area of the household. Instead, basement playrooms and/or small upstairs bedrooms tend to be considered children's turf. Active and noisy play, essential components of children's activity, are generally discouraged in the interior of the home.

Many homes treat the living room as a preserved space. In only two of the survey homes were children encouraged to use the living room; it was considered prohibited, "off limits" space in one-third of the homes. Whether this pattern comes from a desire to maintain an adult enclave or to establish a showplace of the family's best furnishings, the living room carries a strong image of "maintaining a front". Children's everyday behaviour is not part of this image of the living room; they represent a threat to the image of the house. Children are often relegated to basement playrooms and family recreation rooms. The main living area of the home may well remain unused except for special occasions.



The present report is based on an alternative, child-oriented set of values. While recognizing the multiple functions which a home must fill, it places the needs of children significantly higher on the list of priorities. If adopted, the proposed guidelines for design and adaptation of the home environment will lead to homes which are very different in appearance and function from the homes of today. Just as energy conservation requirements are producing changes in the design of our dwellings, increasing awareness of the requirements of our young children must also be reflected in the way we plan and use our homes.



Cooking together

#### SUMMARY OF GUIDELINES

Following is a summary of the guidelines presented in this report.

#### OUT OF THE CELLAR, INTO THE PARLOUR

Young children want to play within visual and acoustic contact of the adults caring for them. (Pollowy, 1977) The adults, although not necessarily in the same room, want to maintain supervision of the young children. Therefore, the major location for children's play should be close to the centre of activity of the household. Neither second floor bedrooms, nor basement playrooms are satisfactory locations for young children's regular play activity.

There are educational and developmental benefits to young children's participation in such regular household tasks as cooking and cleaning. Family housing should be designed to support such activities by children. Preschool children do not naturally differentiate. For them, manipulation of tools and materials, whether real or toy, in their environment is important.

However, there is great satisfaction when the products of their efforts are something they can experience, such as in cooking and gardening.

#### ADAPTATION OF LIVING SPACE FOR CHILDREN'S PLAY SPACE

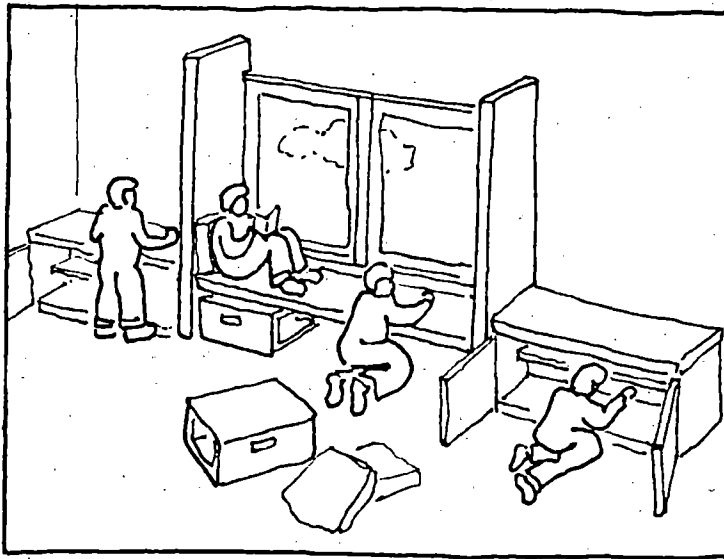
##### ACTIVITY AREAS

- Children's play should be permitted and encouraged in the main living areas of the home. This may be achieved either by adapting one centrally located room into a playroom, or by locating a number of smaller activity areas throughout the living room, dining room, kitchen, and hall spaces.
- Various different activity areas should be established to permit more than one play activity at the same time. A large playroom can be subdivided by a low storage unit.



- Alternatively, activity areas can be set up in different rooms, such as: a kitchen table for arts and crafts; a hall for riding toys, and a coffee table for puzzles and games.

- Each activity area can be established by convenient storage units containing the toys, games, and materials that support that particular activity. Young children prefer to play on the floor. Each activity area should contain as much open floor space as possible.



- Activity areas need to be visibly connected so that one adult can supervise activity in more than one area at one time.

- The following activities are important to the development of children. As many as possible should be accommodated within the house in order to provide a rich setting for children:

Play with structured games and puzzles.

Books, magazines

Arts and Crafts

Play with ride, push, pull, wheeled toys.

Gross motor activities.

Fine motor activities

Water play

Play with small-wheeled toys.

Music

Cooking

Dramatic play

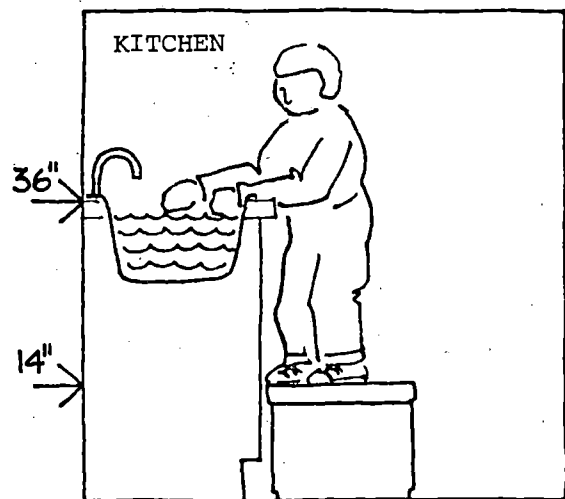
Individual private play.

Construction



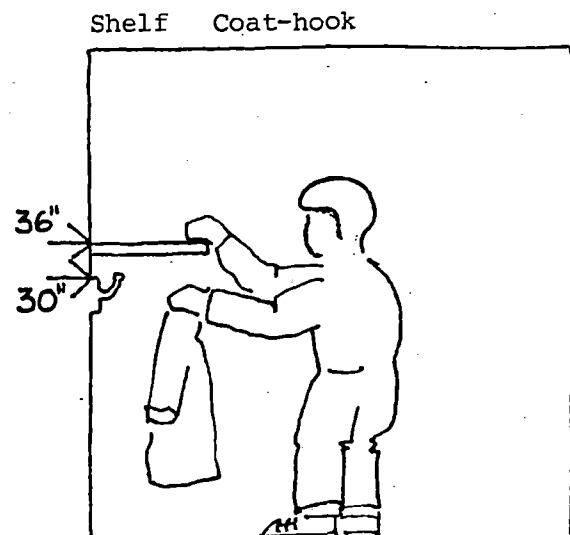
## SUPERVISION

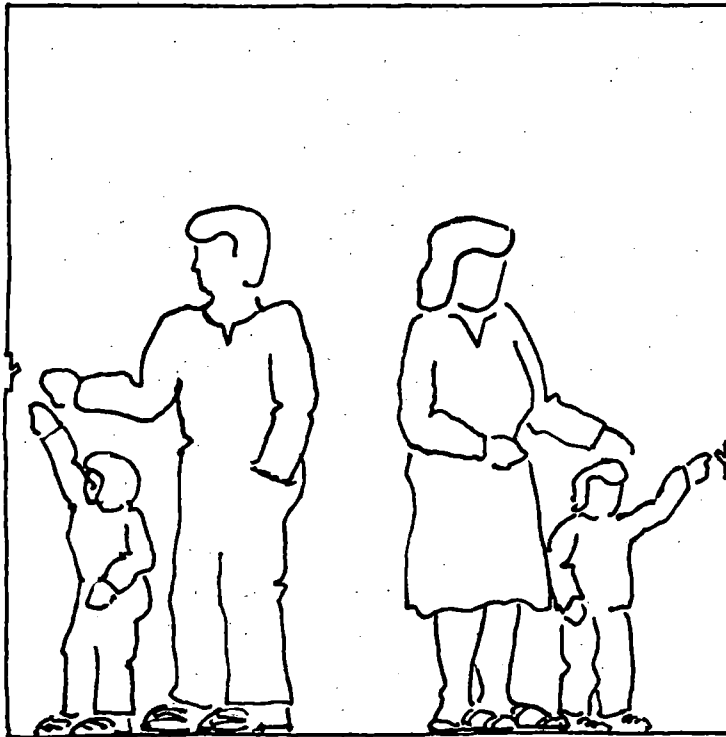
- At some times, young children require direct supervision by an adult. At other times, the needs of children and their adult caretakers are best served by indirect supervision. Such indirect supervision can promote safe, independent play by young children. A home should therefore provide a place where an adult can sit or work in one room and simultaneously supervise indoor play areas.
- One design solution for this is a pass-through opening in the wall between rooms, such as the kitchen and the playroom--i.e. an "interior window".



## ACCESS

- Children require easy access to toys and equipment, outer clothing, toilet facilities, and outdoor play opportunities. Increasing the accessibility of these aspects of the child's environments promote independence and a sense of self worth. To the extent that children are able to meet their needs independently, the job of the adult caregiver is eased. Children's access to the household environment is largely a matter of the scale and positioning of various fixtures in the household. Children can reach coats, boots, and other outer garments if shelves, coat hooks, and racks are placed at their height.





the norm 4' (1.2m)

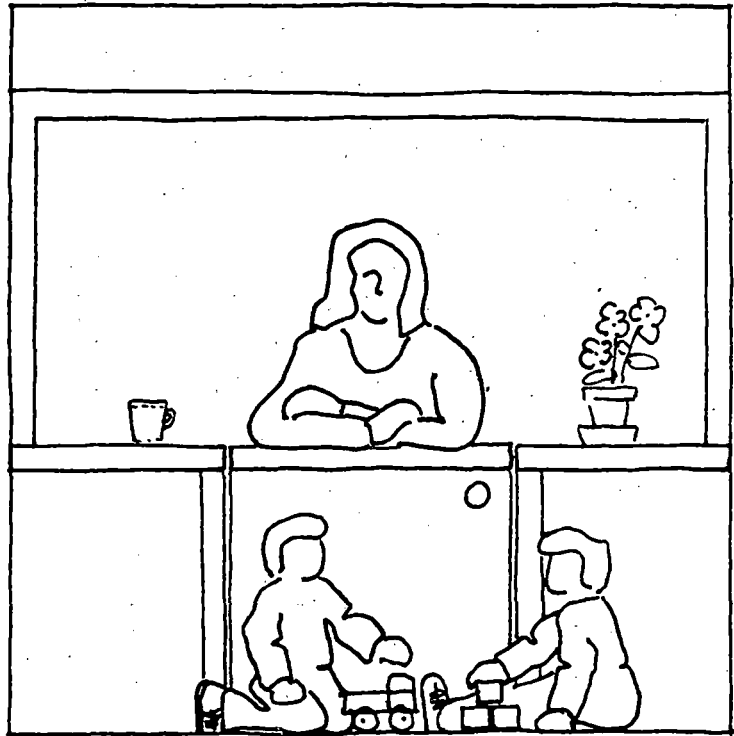
proposed 3' (900mm)

- Placement of doorknobs and light switches at a height of 3 feet (900 mm) or lower puts them within reach of young children. In the bathroom a sturdy 12" (300 mm) platform permits children to stand at the sink or reach the toilet. A lower mirror and towels for each child promote independence in grooming.
- Young children require easy access to outdoor play areas. Homes should provide vestibules for both front and back doors to accommodate wet boots and outer clothing, and to contain drafts of cold air. Covered porches, both front and back, give children easy access to the outdoors, provide storage for play equipment, such as tricycles and wagons, and permit extension of play activities to a sheltered location.

#### THE KITCHEN AS A FAMILY ROOM

- The centre of adult and family activity is generally the kitchen. Play areas should therefore be located within and adjacent to the kitchen so as to be visible from the kitchen work area. Interior windows may be created between rooms to facilitate this supervision.

- The kitchen is a convenient setting for a number of children's activities, such as arts and crafts, water play, and cooking. The design of the kitchen area should provide opportunities for children to pursue such activities in the kitchen.
- Kitchens also contain potential hazards for young children. Young children should generally be kept out of the kitchen work area. This requirement may necessitate half-doors or some other device to control children's access to this part of the room.



Halfdoor with interior window for safety and supervision

## CHILDREN'S BEDROOMS

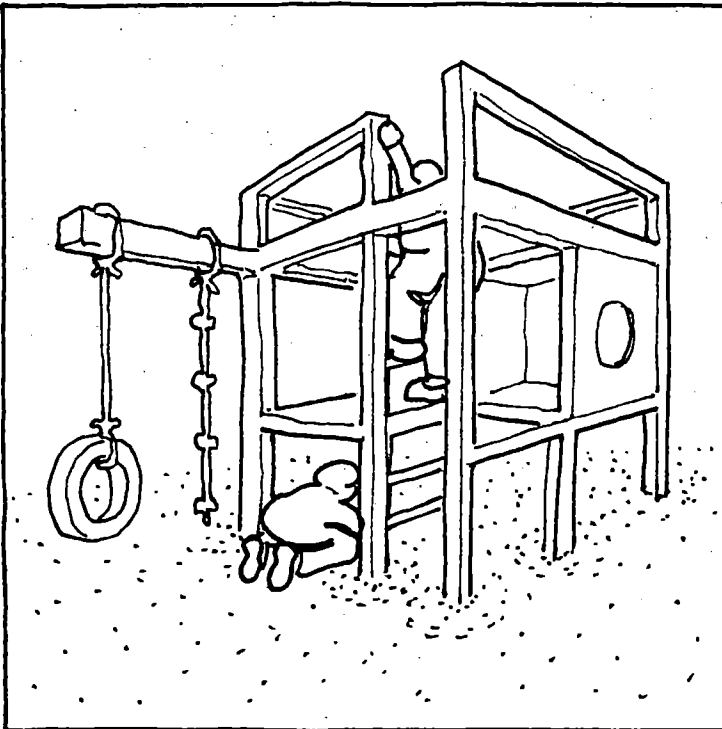
- The child's bedroom has symbolic value because it represents her or his own personal space.
- Children's rooms should be planned so that shelves, drawers, and closets are accessible by children themselves.
- In addition to providing a quiet, secure sleeping space, a child's bedroom should also provide opportunities for a variety of play activities.



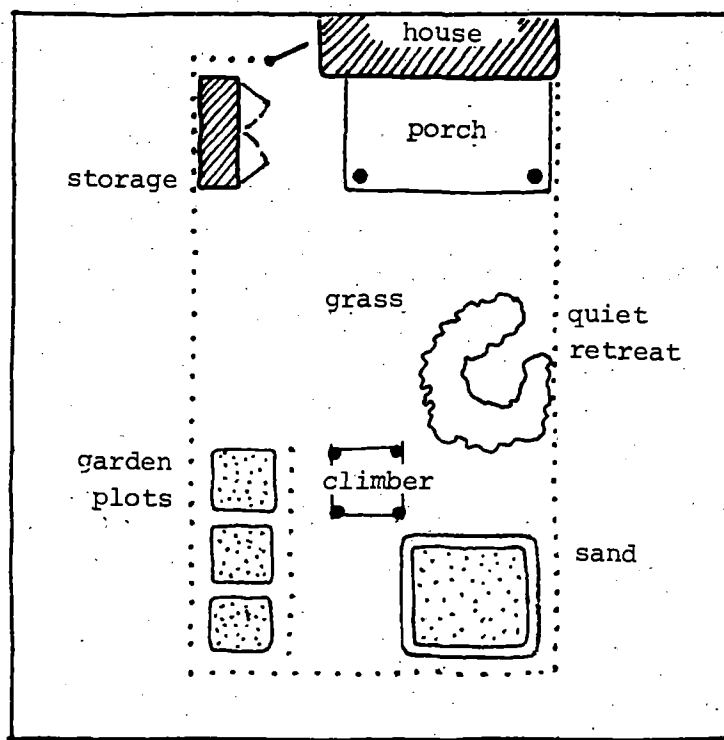
- Bedrooms should be organized so that as large a floor space as possible is created for floor play. A low window provides light and view for the open floor area.

### OUTDOORS FOR ALL SEASONS

- Young children require easy access to outdoor play areas.
- A fenced outdoor yard and porch space should be available, so that children can play outdoors independently, without worry. Casual, indirect supervision from the kitchen work area is required. An outdoor play yard should contain the following:
  - A fence, at least four feet high (1.2m), with no foothold, which cannot be climbed.
  - A digging area of sand, 2 feet (600 mm) in depth, with a wide timber edge around the sand, and 6 inches (150 mm) minimum below surrounding ground level, so that the sand is contained.
  - A small climbing frame, above sand or grass. The lower portion of a climbing structure may be a playhouse.
  - Tire swings or rope swings which could be part of climbing structure.
  - An outdoor water supply. The play yards should have an outdoor tap, with hose, a variety of sprinklers and plastic containers.



- A large porch or deck with roof shelter.
- A movable picnic table.
- A lockable storage shed should be provided for children's vehicles and outdoor equipment. The top of the shed can be used as a climbing platform.
- Hard-surfaced paths for tri-cycles and wagons.
- Play opportunities located at various elevations. Children enjoy play spaces that are higher than ground level.



Plan of a back yard

- The following activities are considered important to the total development of children. As many as possible should be accommodated in adjacent outdoor play areas:

Play with wheeled vehicles- ride, push, pull toys.

Gross motor activity

Sand Play

Water Play

Snow Play

Construction

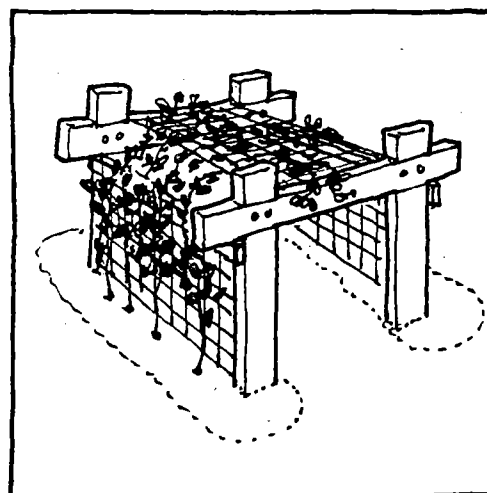
Arts and Crafts

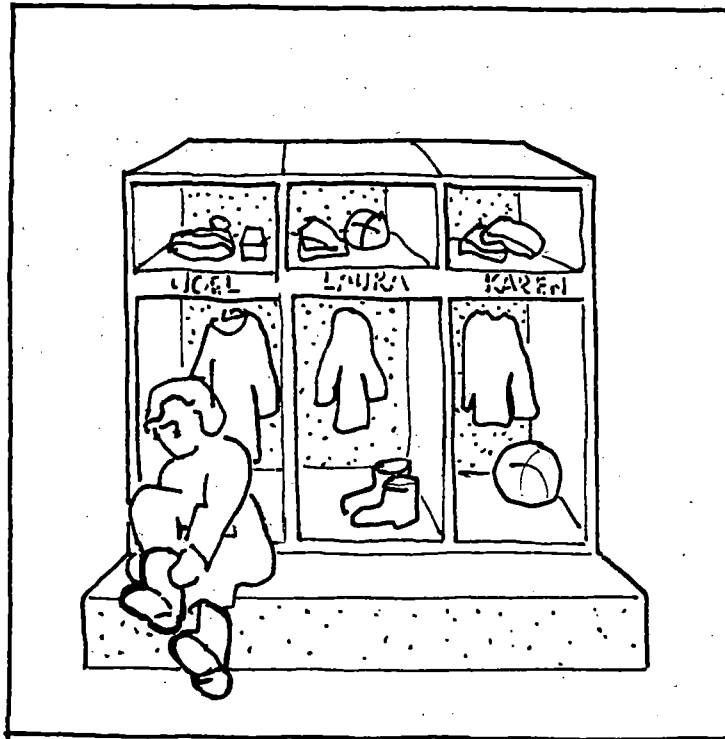
Play with small-wheeled toys.

Gardening

Quiet retreat

A "bean house", vines that kids can grow





Typical daycare personal space

## FAMILY DAY CARE GUIDELINES

The above guidelines apply to both family homes and family day care homes. For day care homes, however, there are additional considerations, which are represented in the following guidelines.

There is a risk that the day care child will feel like an intruder in the "home away from home". In fact, among the day care homes surveyed, it was not uncommon for resident children to declare their bedrooms "off limits" to the day care children.

It has long been acknowledged within the day care profession, that children can benefit from having a space or a corner that is exclusively their own. This practice can give a child a sense of belonging in an institutional setting. In practice, such personalization of space may be mainly symbolic, and may consist of simply assigning each child her or his own coat hook or shelf space.

- It should be recognized that the child in a family day care home has a similar need for a sense of belonging in the day care environment.
- Such personalization of space may begin with the symbolic act of simply assigning each child her or his own coat hook or shelf space. Perhaps more important, the home should be organized as a set of intimate places--corners and nooks that a child can immediately identify with as comfortable for the activity of one child or a small group.

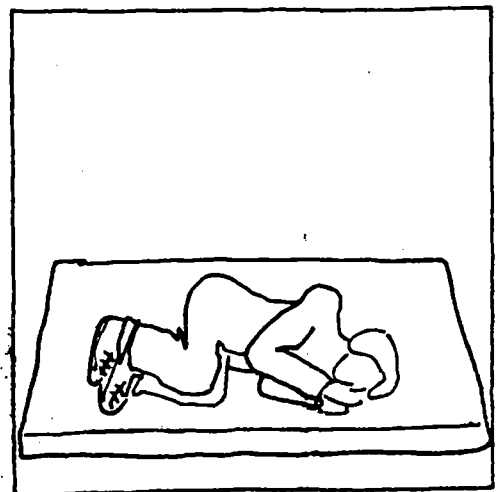


- Consideration should be given to design features that promote adaptation of living space from family use to day care use on a daily basis.

- In addition to eating, washroom, and circulation areas, there should be sufficient play space to provide 30 sq. ft. (3 sq.m.) per child.

A family day care home should provide the following facilities:

- A place for bulk storage of larger toys and mattresses or cots.
- A place for children to sit and eat meals and snacks.
- A convenient washroom.
- A place where an ill child can be isolated.
- Low hooks for coats and boot tray or shelf located in a vestibule area.
- An outdoor yard space completely enclosed by a minimum of a 4 foot (1.2m) fence.
- A covered front or back porch providing 20 sq. ft. (2 sq.m.) per child.
- A sand pit providing digging/ play area of 10 sq. ft. (1 sq.m) per child.
- A lockable storage shed for tricycles and garden toys.





## Chapter Two

### ADAPTING THE LIVING SPACES OF THE HOME FOR CHILDREN

2

If we imagine a typical Canadian, 6-room dwelling we would probably find that the children only have daily access to the kitchen and their bedroom for play activity. The living room, dining room, and "master" bedroom are usually off-limits or discouraged. (perhaps the fact that our culture retains the word "master" to describe a parent's bedroom, speaks clearly of a lack of consciousness in attitudes toward children in the home).

The home setting can offer a myriad of opportunities for the young child to play, learn and work. Full realization of such in-home opportunities requires children's use of space traditionally considered adult-only territory. Preschoolers do not wish to play separately from contact with adults or away from the daily activity of the home. The main living area of the house, close to the supervision and stimulation of parents or caregivers, can be adapted to offer a greater variety of possibilities for challenging intellectual, social, emotional, motor and language development of young children.

Gerhard Rosenberg also argues for integrating children's activity within the main floor living areas rather than setting up separate play rooms.

"Just as the English had "nurseries" to keep children out of their parents' hair, so the Americans have now developed the "rumpus room".

Nothing could be more helpful to "administrative convenience" than a rumpus

room, and it certainly is especially desirable for teenagers. There are however, a number of things which raise serious objections to its use for young children. Parents should observe their young children at play. Play is communication. Through observation and interpretation of a child's play parents can find the best way to help his growth and development. Wiring the rumpus room for sound to the kitchen does not allow for observation or for timely intervention...

The smaller a house is, the more each room is liable to be used by children. This means that each room has to have a corner where a child can play out of the general circulation, and some storage is needed in each room so that toys can be left, if not overnight, at least for a little while...

As soon as there is enough money to add some more square feet, the first need is for one tidy and peaceful room as a refuge for the mother. This is more important than a separate play or rumpus room."  
(Rosenberg, 1978)

This chapter develops a full set of activities which are taken from group day care and child development experience. An emphasis is placed on achieving the complete range of activities in a home setting in order to fulfill the total developmental needs of the preschool child.

For each activity, environmental requirements are given to establish the qualities of space, furnishings and physical relationships.

The last part of the chapter illustrates how one might transform the living areas of the home to support these activities in traditional rooms.

## PLAY OPPORTUNITIES THROUGHOUT THE HOUSE

(Note: Further guidelines are developed on kitchens, bedrooms and outdoor areas in Chapters 3, 4 & 5.)

In the homes surveyed in this study, structured games and puzzles, books, music, arts and crafts, play with push/pull toys and construction activities occurred with greater frequency than did sand and water play, gross motor activities, and cooking. In a similar Swedish study Gaunt found that passive, receptive activities tended to be more common than active, creative ones, (Gaunt, 1978) In the Swedish dwellings play was more restricted to bedrooms which were too small to accommodate active play, but in our survey homes, playrooms were common and kitchen areas were often used. This would lead one to believe that restrictions on children's play is based more on adult attitudes toward the image of the house and lack of imagination in supporting active and creative play.

In addition, children's low involvement in cooking activity, reflects cultural expectations which operate to deny children opportunities for helping in family tasks. Children do not distinguish between work and play, and do enjoy activities where they can experience real results from the efforts such as cooking and gardening.

## STRUCTURED GAMES AND PUZZLES

- Play with structured games and puzzles is cognitive-oriented activity which affects the child's perceptual and intellectual development. These activities are quiet, and are done on an individual or small group basis. In the majority of homes surveyed, these activities were done in the child's bedroom

or playroom. Louise Gaunt's survey of Swedish family homes also indicates that most homes do provide opportunities for children to pursue these quiet activities (Gaunt, 1978).

- A work surface should be provided, such as a floor or low table which permits small parts to be viewed, spread out, and manipulated.

- Avoid having such floor areas in circulation routes. Higher tables may be necessary when toddlers disrupt puzzles and games.
- Adequate lighting, directly over the table or floor surface is required.
- Provide a low accessible storage shelving, either open or closed, in close proximity to the activity area. Such shelving may establish activity boundaries.



## BOOKS

The young child can explore picture books on his own, or can have books read to him. Such activities are valuable for language development, and for stimulating a child's imagination and fantasy. This activity is often quiet, solitary time. Children's books are easily stored on low shelving within children's reach. Among the homes surveyed, children's bedrooms and playrooms were the most frequent locations for reading activities. The survey also indicated that reading activities tend to be initiated by the children themselves, rather than by adults (parents or caregivers). Books however was an activity which adults and children shared.

- Provide adequate electric lighting or a reading place set up by a window.
- Low shelving permits storage and display of books at child's level.
- This might be placed in the lower shelves of the family bookcase.
- Children's books may be located in close proximity to other reading readiness materials, such as magnetic letters, other printed materials, and writing equipment.

## ENVIRONMENTAL REQUIREMENTS:

- Provide a quiet space, visually and acoustically, which is defined by soft furniture, such as a sofa, window seat, oversized floor pillows, carpet, or soft chair.

## TELEVISION

Research on children's television viewing suggests that television can be utilized as a learning tool if the program is child-focused, and provided an adult functions to extend and repeat the significant concepts presented in the program. In our survey, the majority of children viewed some television during the day. In most cases, supervising adults controlled children's access to the television.



Adults can control TV

#### ENVIRONMENTAL REQUIREMENTS:

- The television set should not be located in an area where children spend most of their time. In this way, the television is not perceived as a regular activity.
- A second option is that the television be located where adults can control TV watching and the TV can be closed up behind cabinet doors.
- Comfortable seating should accommodate children as well as adults.

#### ARTS AND CRAFTS

Creative play with art and craft materials provides children with sensory and cognitive learning experiences and facilitates their fine motor development. Most important, such activities stimulate children's imagination. In addition, for some children, the repetitiveness of some crafts activities provides an opportunity for relaxation.

Arts and Crafts activities tend to be done individually, or in small groupings of children. Crafts activities are individual in nature, and are not settings for high social interaction.

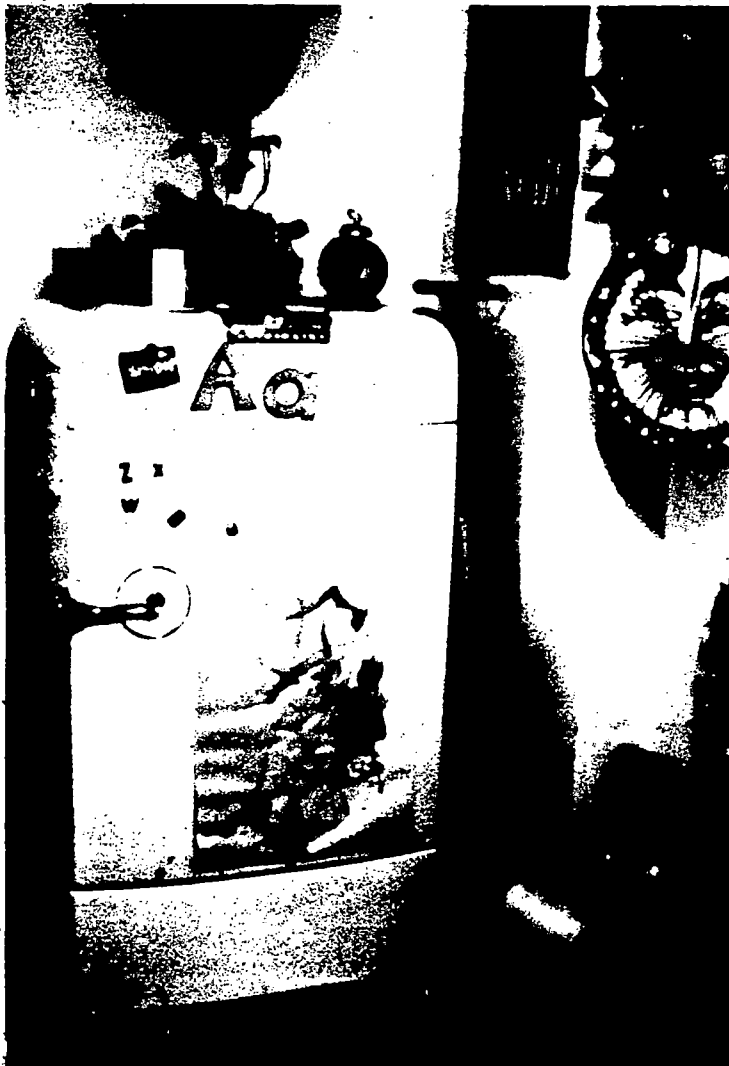
The majority of homes surveyed encouraged children to use pencils, paints, crayons and paper on a regular (daily) basis, and chose the kitchen as the location for the activity.



#### ENVIRONMENTAL REQUIREMENTS:

- Provide a variety of work surfaces, both horizontal and vertical, such as tables, floors, tiled walls, or even refrigerator doors.

Refrigerator door as easel



- Floor and table surfaces should be easily cleanable. If surfaces require protection, a drop sheet can be used during the activity, then stored in a location close to the activity area.
- Good daylight or electric lighting is required over the work area.
- The activity area should be situated so as to enable visual supervision and--when desired--participation by adults.
- The area should be located off of main circulation routes to prevent distraction and to permit a child to concentrate on the activities.
- Close access to a sink will make preparation of materials and clean-up easier.
- Storage should include space accessible to children as well as space which is out of their reach.
- A clothesline or cork board can be mounted at child's level to dry and display art work done by children.
- Although creative activities can occur anywhere in a home, these activities appear best suited to kitchen and dining room areas, permitting supervision, adult involvement, ease of clean-up and a quiet setting.

## SAND AND WATER PLAY

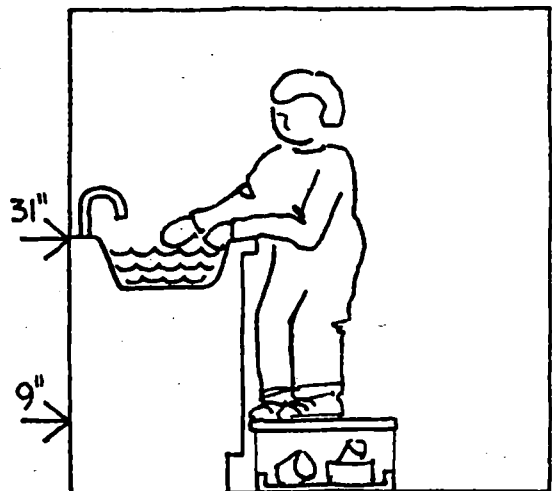
Sand and water play, like arts and crafts, permit a child to use materials in any way he wishes. These activities provide limitless possibilities for imaginary play, sensory experiences, fine motor and social development.

Virtually none of the sampled homes provided indoor opportunities for sand play. Water play, on the other hand, was permitted in approximately one-third of the homes, with either kitchen or bathroom as the location for these play activities.

In Canada, long cold winters and short summers tend to limit children's opportunity for play with such natural elements as sand and water. It would seem, however, that the importance of these activities in child development combined with the widespread preference which children have for these activities, indicates that sand and water should be introduced into the indoor play environment. In a household setting, water play may include the use of water for washing dishes, articles of clothing or toys. In this way, children can gain a sense of participation in the general household responsibilities.

## ENVIRONMENTAL REQUIREMENTS:

- Sand and/or water play tend to be social, active times. Sand and water play areas should therefore be separate from quiet activity areas.
- Sand and water play should be located in a space which permits visual supervision by an adult.
- These areas should be located close to a water source, and should use surfaces which are easily cleaned. The water play area should be "non-slip" when wet.
- An indoor sand-box may be located in a baby bath, plastic dishpan, or wagon which may be placed directly on the floor or on a work surface.
- The water container should be at child height, 22 inches (560mm). Some of the survey homes achieved this by providing a secure bench enabling a child to reach an adult height sink.

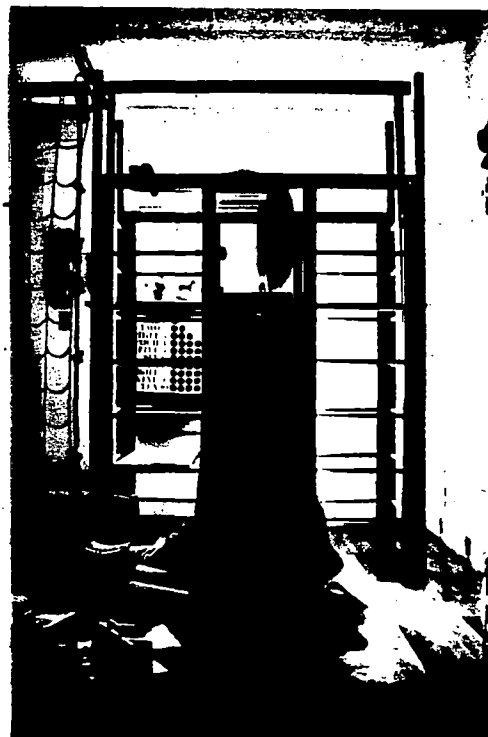




## GROSS MOTOR ACTIVITY

Gross motor activities support the physical development of the young child. Wheeled toys, such as tricycles, wagons, push and pull toys stimulate active play by children. In most Canadian homes however, such activities are generally considered inappropriate for the main living areas of the home. The survey revealed very few instances of such gross motor activity inside the home. When such play was permitted, it tended to be located in basement areas. Louise Gaunt's study of Swedish family housing describes a similar pattern, with gross motor play reserved for outdoor settings and banned from the indoor environment. (Gaunt: 1978).

It is certainly true that gross motor activities involving wheeled vehicles place heavy demands on the physical environment of the home. Nevertheless, because of their importance for children's development, it is felt that the home environment should be adapted in such a way as to provide for the use of such play equipment. This is not meant to imply that family living space should be totally converted to a gymnasium. What is advocated is a more adaptable, multi-purpose approach to housing design such that a growing child's need for active movement can be met in the home setting.



"Family living space should not be totally converted to a gymnasium."

## ENVIRONMENTAL REQUIREMENTS:

- Floor surfaces should be smooth and hard.
- Storage facilities should provide parking space for children's wheeled toys when they are not in use. Such storage should be located in close proximity to the activity area. Front or back closets or covered porches would permit easy access and adequate storage for this type of play equipment.
- Interior hallways and dining rooms, often under-used space in homes, can provide an appropriate setting for children's vehicular traffic and active play.



Active Play can combine gross motor and construction activities

## CONSTRUCTION ACTIVITY

Children learn from the opportunity to manipulate and change parts of their environment. (Nicholson. S. 197 ) Building activities foster cognitive, physical and perceptual development. Cooperative social play is often another result when children combine strategies and skills. The biggest attraction of construction activities is that they are "open-ended" -- the parts can be combined and recombined in an infinite number of ways, limited only by a child's imagination and skill level.

In a home setting, construction activities can include such materials as blocks, cardboard cartons, foam rubber pieces, as well as regular household furnishings as chairs and tables.

- Unobstructed floor space, free of barriers and risk from unprotected stairways provides an appropriate setting for children to run and to ride wheeled toys. Cellar doors kept open for pets, can pose a hazard for such active play in the home. One of the survey homes wanted the children to be able to ride tricycles on the main floor, and wanted their cat to have access to a pan kept in the cellar. To avoid the risk of children falling down the cellar stairs, they cut out a hole in the door to the cellar -- big enough for only a cat to pass through.

Available boxes and foam blocks.

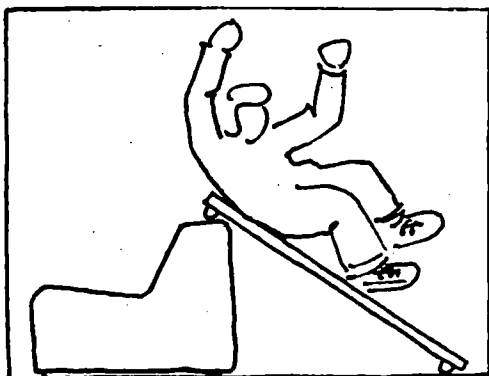


A majority of the respondents reported that they encouraged construction activities by children. Playrooms or basements were the most usual locations for these activities.

#### ENVIRONMENTAL REQUIREMENTS:

- A carpeted floor area reduces the noise level from children's construction activities.
- Direct or remote adult supervision is required.
- Storage for materials might include large cardboard boxes, laundry hampers, low shelving which may also function as a space divider.

In one of our survey homes loose shelving with rubber strips on the end (to prevent slipping on the floor) were used as slides with movable foam furniture -- for climbing and sliding.



#### MUSIC

Music, like reading and other listening activities, can help to develop a child's cognitive abilities. Musical activities make few demands on the physical environment of the home, and can be incorporated in a number of areas throughout the home.

Musical activities involving record players and pianos occurred frequently in a majority of the survey homes. The living room was used most often for such activity.

#### ENVIRONMENTAL REQUIREMENTS:

- Alcoves and corners, off of the main circulation routes, offer appropriate spaces for listening to music.
- Soft furniture, cushions, rugs, bean-bag chairs, and upholstered window seats provide comfortable seating for children's musical activities.
- Low shelves displaying a variety of rhythm and other musical instruments can serve to extend listening into actual involvement.
- Record players and tape recorders offer older preschool children independence in choice and control of music.
- Space within living room and dining room areas can be transformed into listening alcoves with the placement of seating and shelving to reduce visual distractions.

## DRAMATIC PLAY

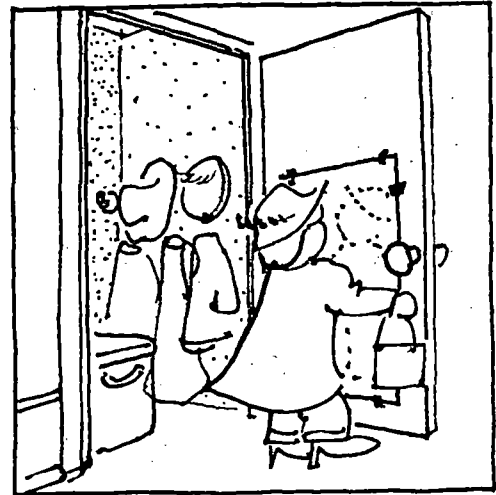
Dramatic and imaginary play are activities critical to the development of the preschool child. Language development, social-emotional maturation, and cognitive development are all fostered through the child's involvement in make-believe.

Among the homes surveyed, a majority provided props for children's dramatic play. Such equipment included costumes, "dress-up" clothing, as well as puppets and puppet stages.

### ENVIRONMENTAL REQUIREMENTS:

- Dramatic play areas should have storage facilities for props and costumes. The optimum storage arrangement permits easy visual access by children, such as hooks mounted on a wall at children's height. Alternatively, the equipment can be stored in a trunk or large wicker basket.
- Wall-mounted, shatter-proof mirrors in the activity area increase the appeal of dramatic play for children. Ideally, mirrors should offer a view of the full figure, i.e. from baseboard to 4 feet (1.2m) above the floor.
- The dramatic play area should be self-contained, removed from the mainstream of activity in the household. Construction materials such as blankets, foam rubber slabs, may also be utilized

in this area, so it may be convenient to locate the dramatic play activity area in close proximity to the area provided for construction activities.



### A PLACE TO RETREAT

All children require some time to get away from social activity -- time to retreat and relax. For children in a day care setting, or children in a play group it is especially important to provide an option for occasionally playing alone. A well-planned home environment can provide opportunities for children to rest, to day-dream and to learn by observing the activity of others.

#### ENVIRONMENTAL REQUIREMENTS:

- A "retreat" can occur in small, semi-enclosed spaces which provide a sense of one's own place. One survey home utilized space under a stairwell for this purpose. A comfortable private space can be made with a large cardboard box with one end removed, and a foam mattress stacked with soft cushions.

"The house we were born in is more than an embodiment of home, it is also an embodiment of dreams. Each one of its nooks and corners was a resting-place for day-dreaming."

"The house, the bedroom, the garret in which we were alone, furnished the framework for an interminable dream, one that poetry alone, through the creation of a poetic work, could succeed in achieving completely."

(Poetics of Space, Bachelard, 1958)

A small window alcove as a retreat.



## TRANSFORMING THE LIVING SPACES FOR CHILD CARE

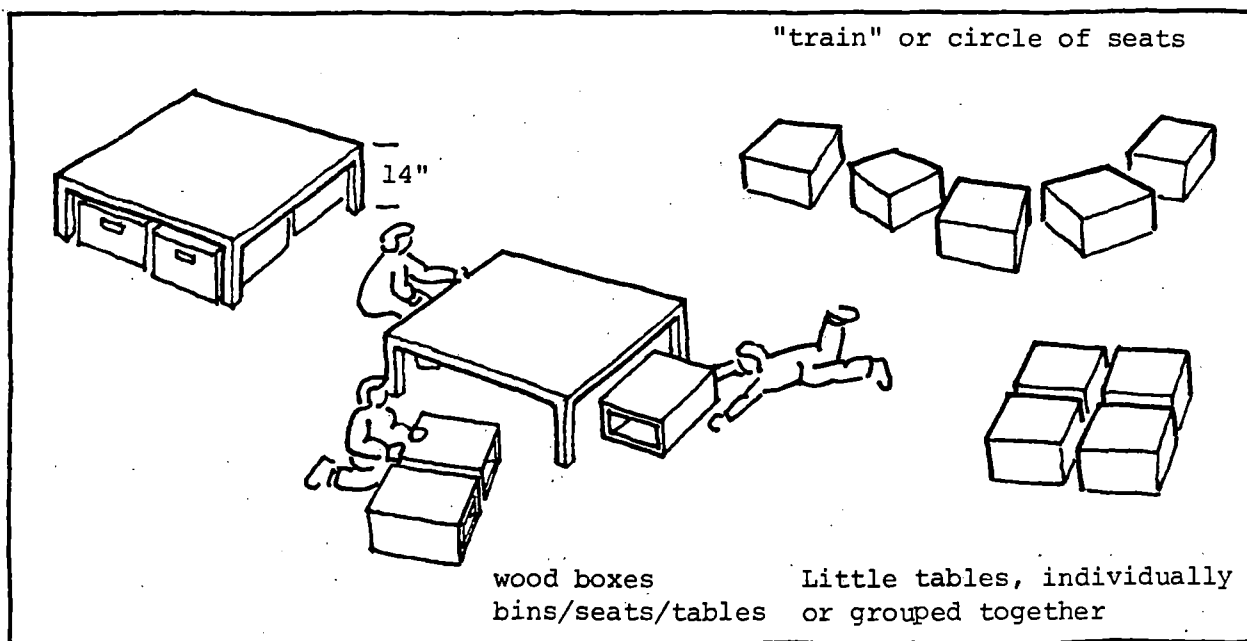
Recognizing the developmental importance of the play opportunities outlined above, the dining room, living room, kitchen, bathroom and hall spaces can be adapted to accommodate these activities without compromising adult needs. Even if a family feels the necessity to maintain the living room as an "adult" room or "best room", the dining room remains as the most unused room of the house. (When there is a dining space in the kitchen, it is inevitably the regular eating place).

## LIVING ROOMS

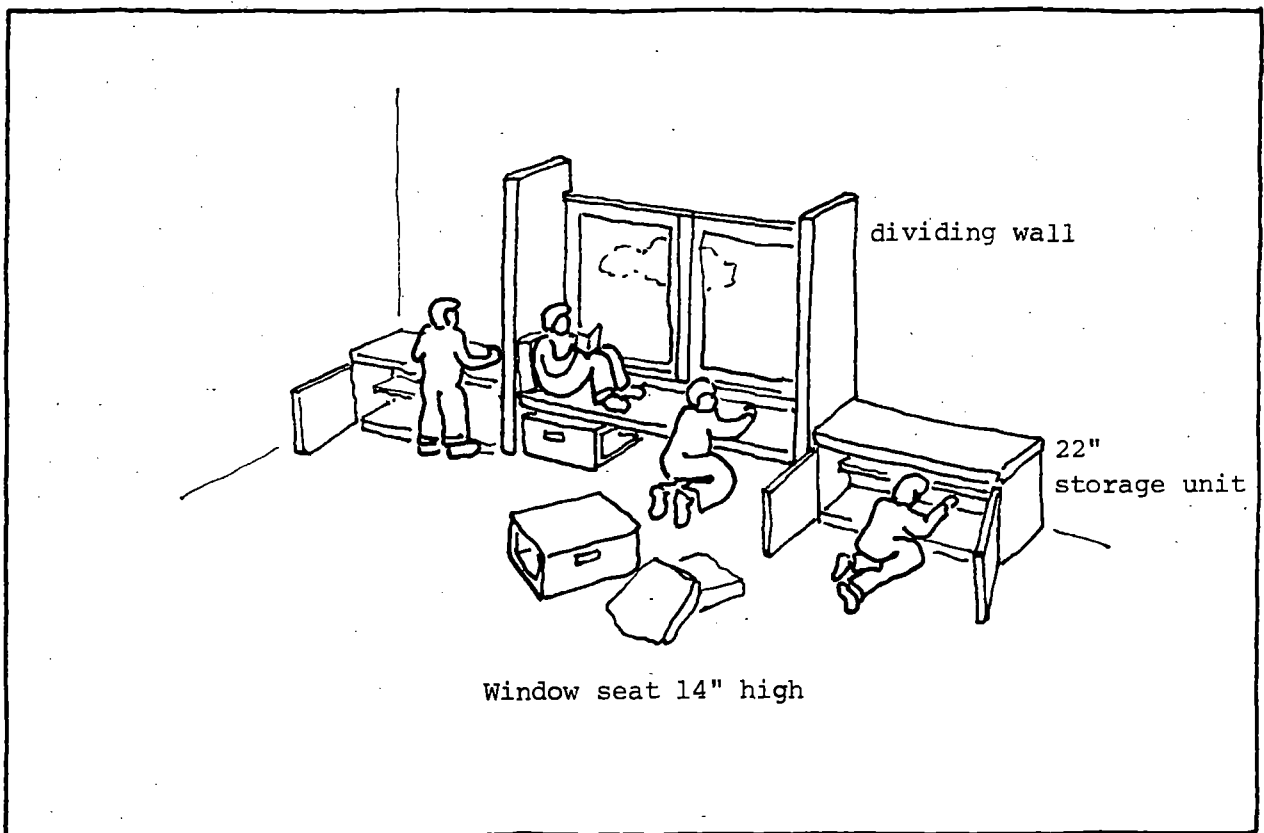
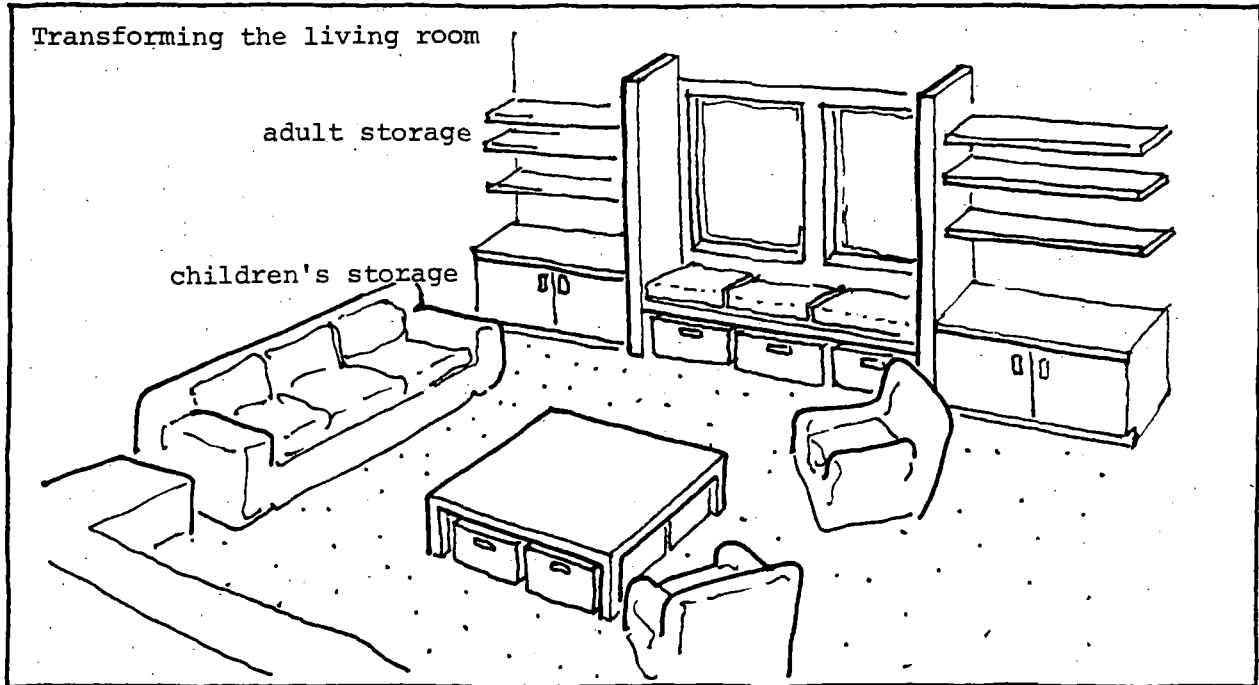
Living rooms could easily support passive activities on a daily basis, such as reading, music, games and puzzles, if some low storage boxes and shelves were provided to support these. A coffee table is a favourite surface for children because it is just the right height to kneel at. The coffee table itself could be designed to contain storage boxes that would double as children's seats.

A low window sill would permit children to see outside even from a sitting position. Nooks such as window bays with window seats, can be created by building storage cabinets on either side of a window.

### Transforming the "coffee table"



Transforming the living room

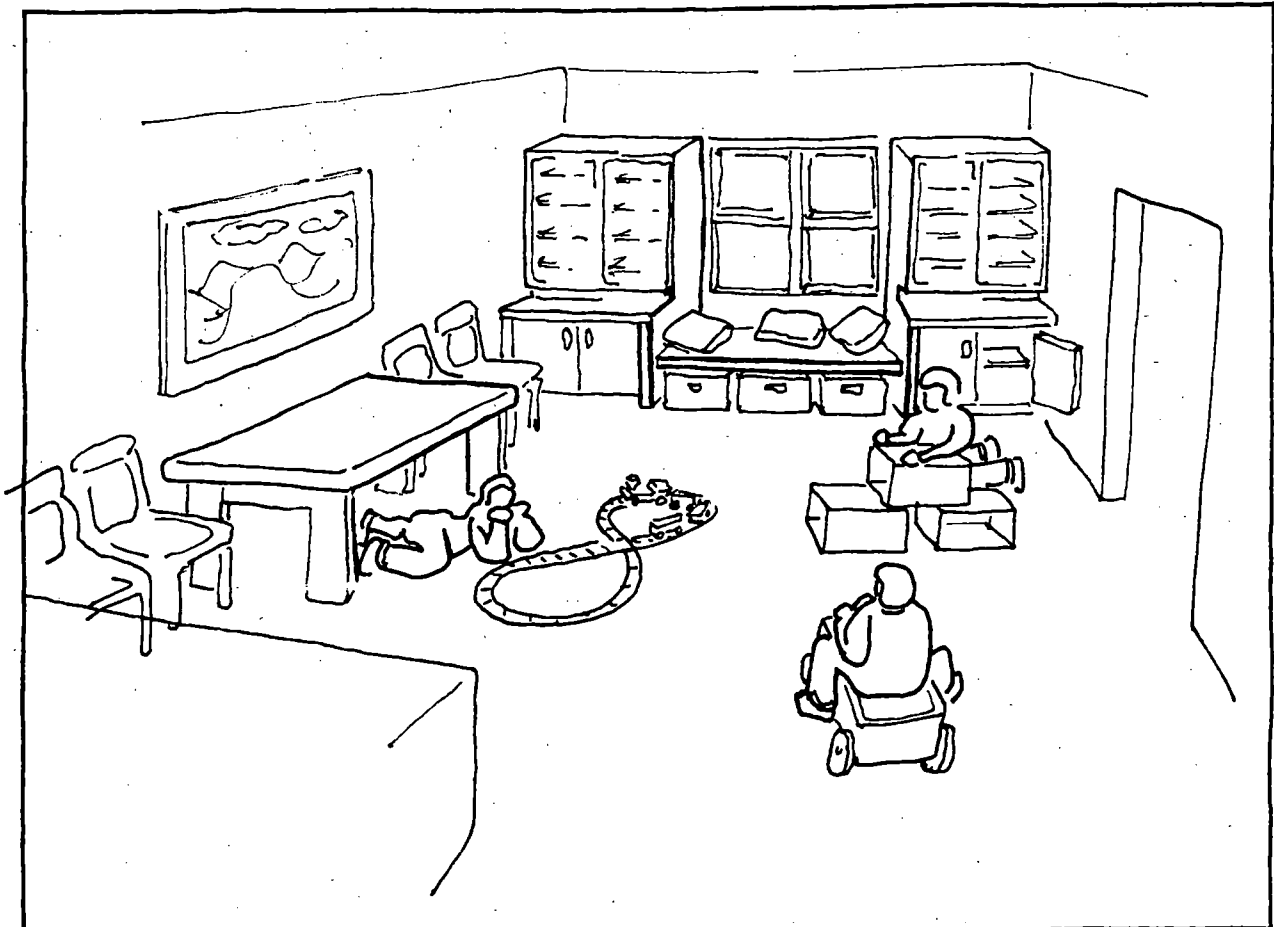


## DINING ROOMS

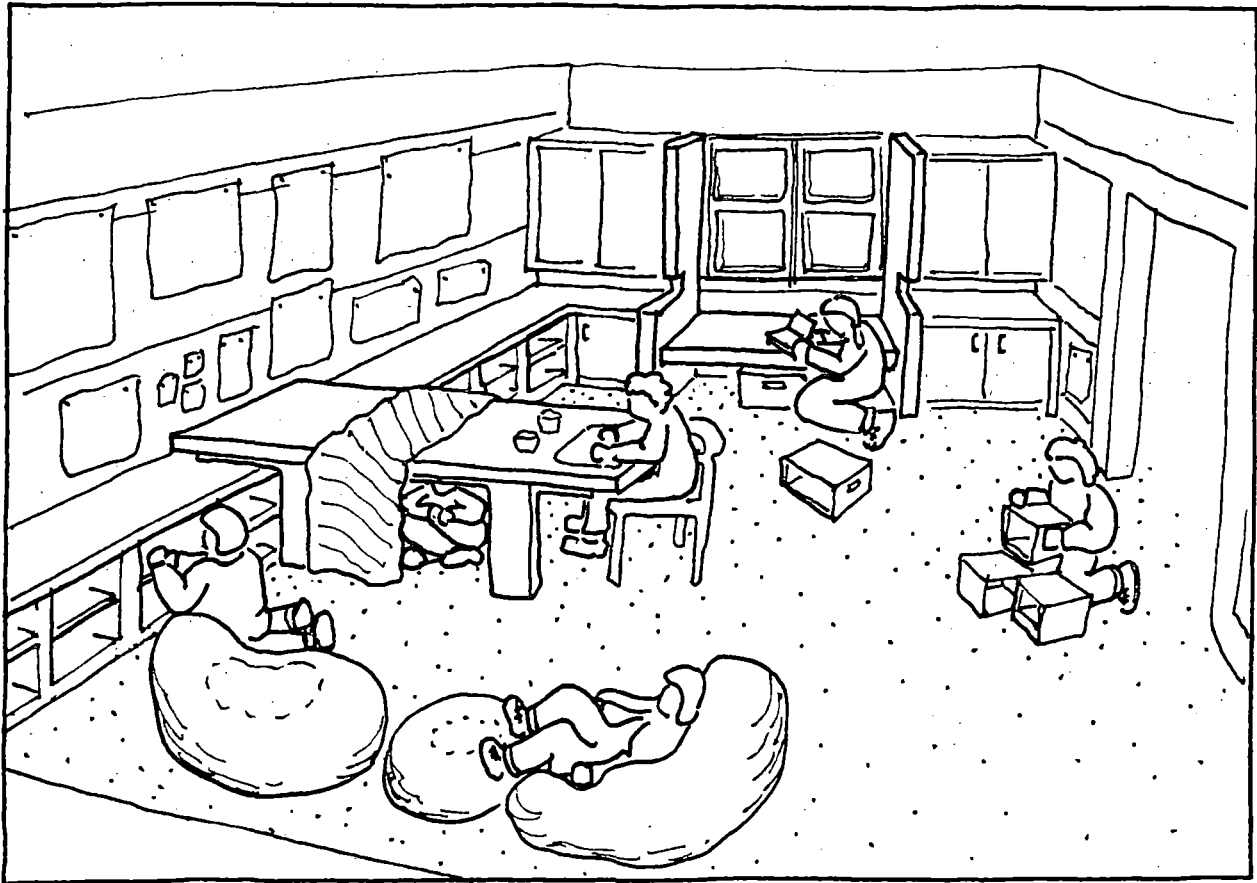
Dining rooms have the greatest potential for major adaptation to a family-playroom. The dining room table can be covered and used as a work surface, and pushed aside to provide maximum floorspace for active play. The close proximity to the kitchen permits easy supervision and the ability to connect the two rooms as a set of varied play spaces supporting different activity centres.

Both dining room and kitchen could have a substantial number of low storage boxes and shelves, each designated as specific places to return toys and equipment in a routine manner so that the business of restoring order every evening can be a relatively simple task for children. The top surface of such storage units should be a work-counter height for children (22 inches/560 mm).

Initial Change: Push dining table aside. Build in china cabinet with storage for children below, on either side of a window seat.



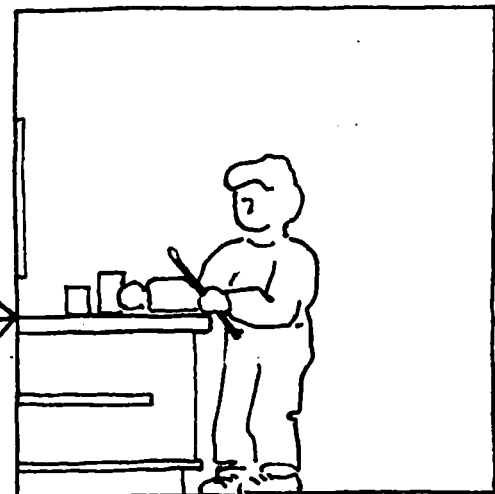




Changed for family day care: Counters at work height, storage below. Movable table divides room into activity areas. Pin up surfaces on walls. Table can still be used for dining.

Former dining room with window to kitchen

22 in. work counter



## KITCHENS

Kitchens are a suitable place for arts and crafts activities, centring around the kitchen table, with supplies and water source nearby. Wall surfaces should provide abundant pin-up space at low levels. If there is space for a low work counter (22 inches/560 mm) it should be provided. In addition creating a step platform gives access to a safe side of the island or peninsula kitchen counter, that contains the sink. These counters would provide opportunity for children to participate in real kitchen activities.

Pin-up/display panels at children's height (less than 4'/100 mm) high bulletin and black and magnetic boards. →

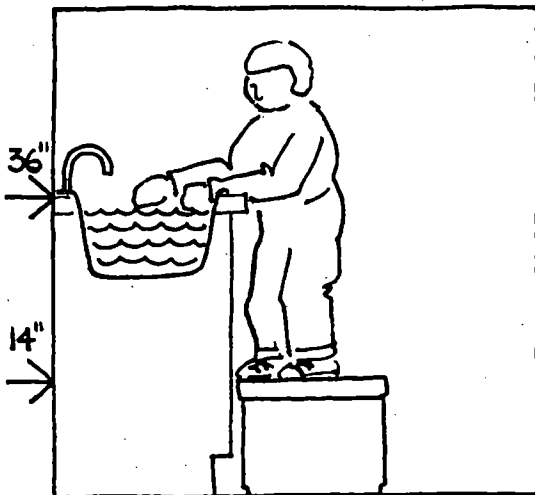
Work bench for kids - 22"/560 mm high has cut out to take removable plastic tub for water play.

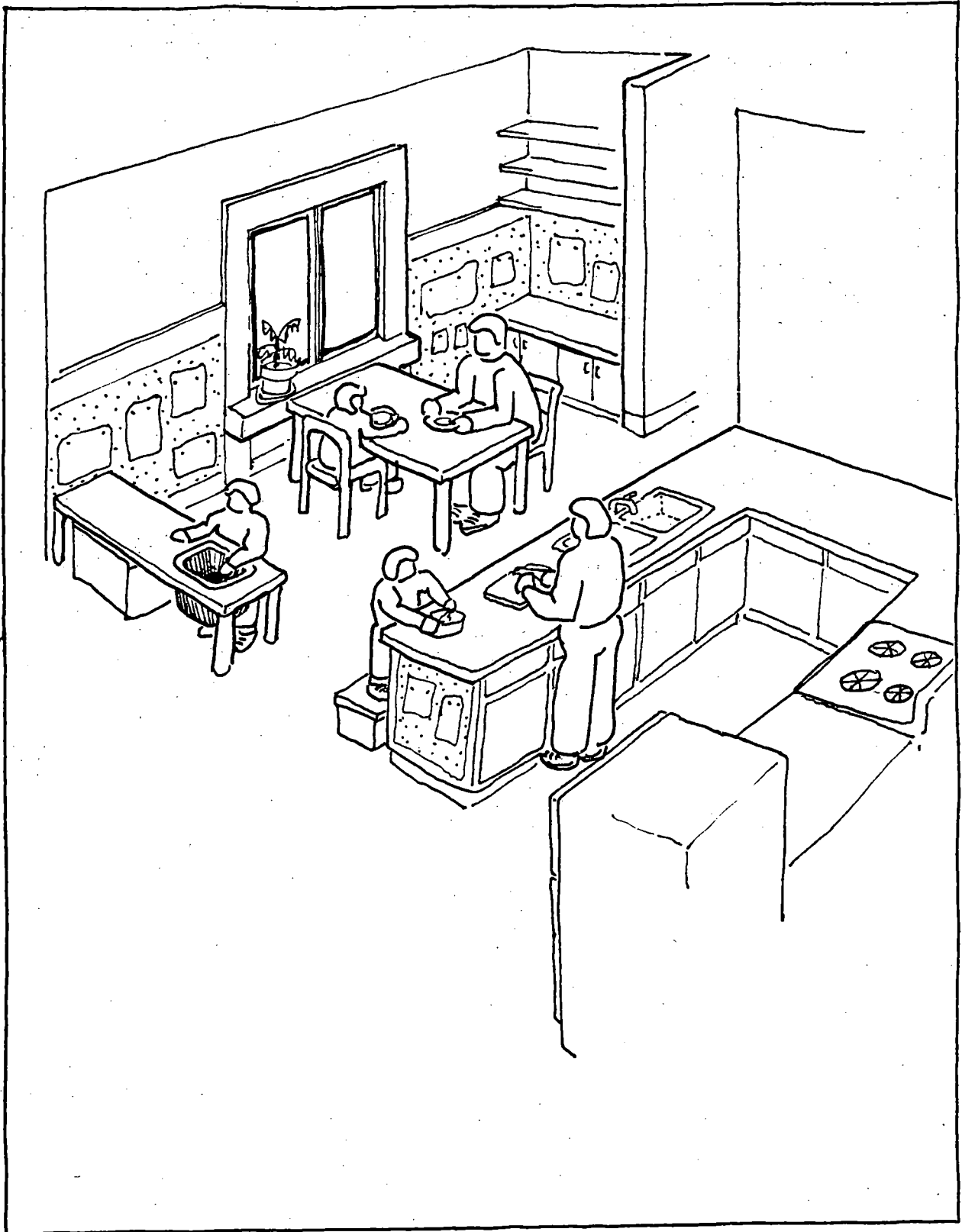
22"/560mm high counter with kids' storage of arts and crafts, etc.

Breakfast/dining table at regular height (28"/700 mm high).

12"/300 mm high step platform - to reach regular kitchen counter (36"/900mm).

Island or peninsula counter with area for kids' cooking - allowing kids to be outside kitchen work area. NOTE: Only sink (not stove) in peninsula counter.



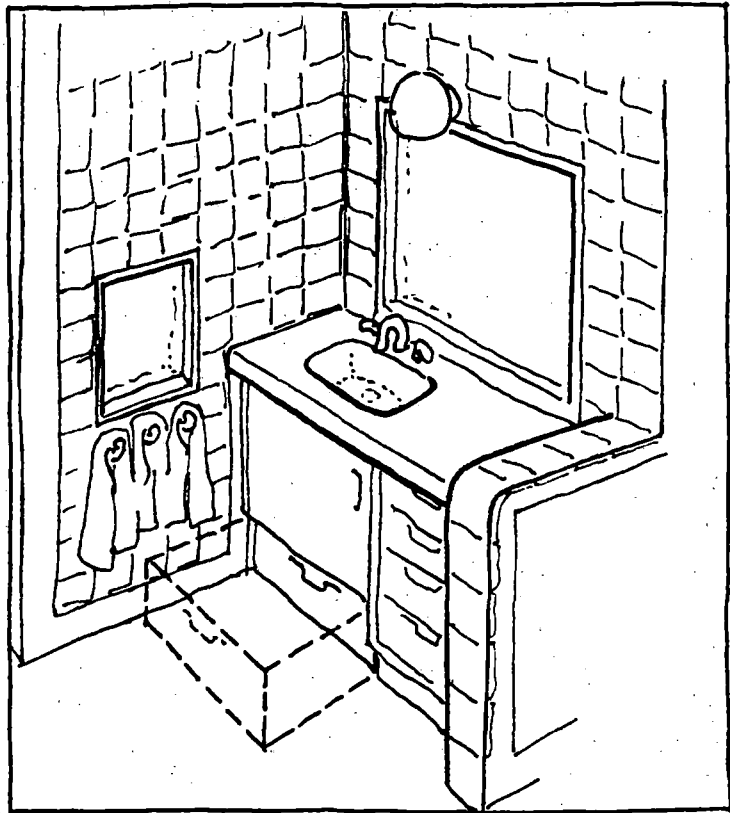


## BATHROOMS

Bathrooms are the settings for essential learning and development in toileting, hygiene and self-grooming. Bathrooms need to be large enough to accommodate "potties", step platforms for reaching sinks, space beside the toilet to allow a parent to help a child, and space beside the bathtub for a parent to sit while bathing a child. Medicine cabinets should have top-latches, out of reach of a child standing on a stool. Medicines and cleaning agents might be best stored elsewhere, totally out of access.

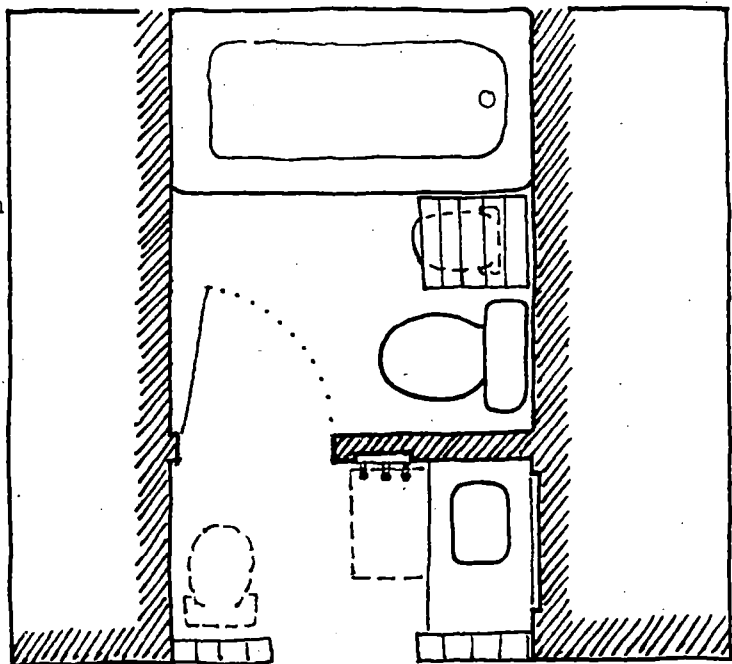
A step platform could slide under a sink vanity to be out of the way of adults using the sink. The same platform might double as a seat for parents bathing the children or for children to use while dressing or drying themselves. It could also act as a box containing bath toys.

Low mirrors, providing viewing centred at 3 feet (900 mm), encourage grooming and hygiene. Tooth brushes, wash cloths, hand towels, and hair brushes can all be accommodated separately for each child, on low hooks, or pegs next to the mirror. Mirrors must be securely fixed to the wall to avoid falling.



Sink alcove with low mirror and step-drawer

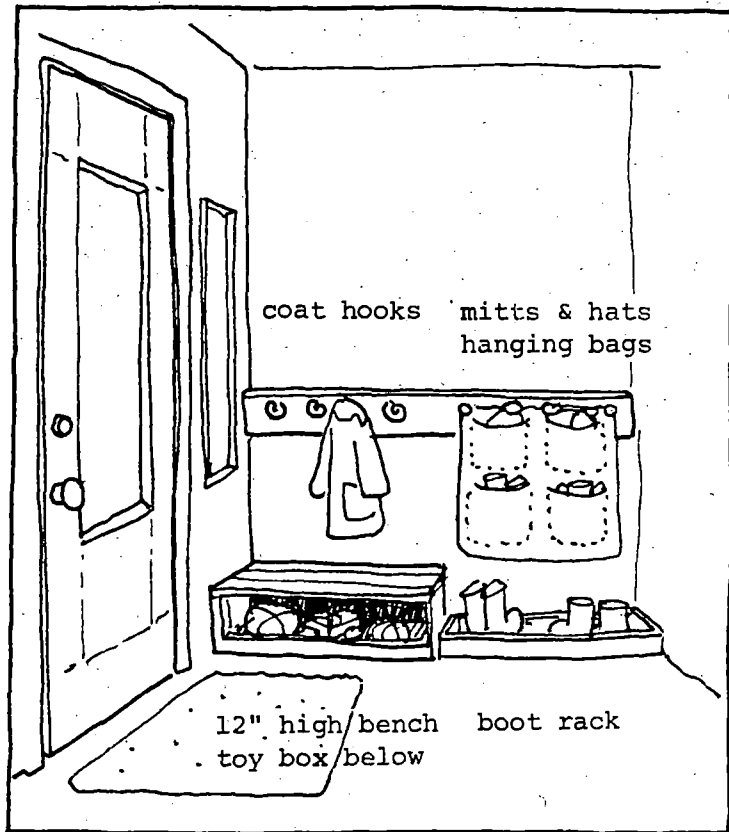
Bathroom Plan: Sink in open alcove



## HALLS

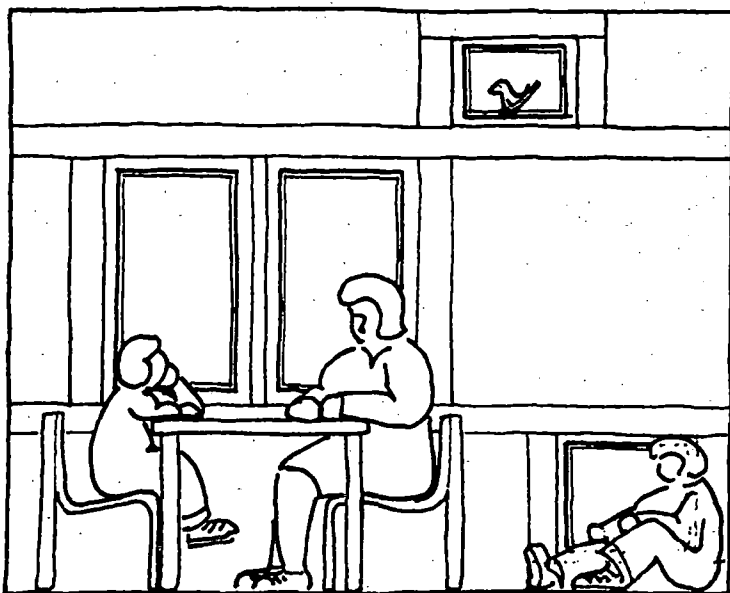
The vestibule space, by the door that is regularly used by children, should be the location of low hooks for coats, a boot tray and bags for mittens and hats. A specific hook or bag would be designated for each child to help make dressing as independent as possible. In addition a narrow box might be provided for balls and small outdoor toys, which could have a hinged top to double as a bench to sit on while pulling on boots and shoes.

Hallways provide additional play space, offering usable floor area and often long routes, ideal for larger wheeled toys such as indoor wagons and kiddicars. Hallways should be made as wide as possible to encourage space for gross motor play, but even narrow halls might expand in one or two places to provide gathering space for vehicles and toys.



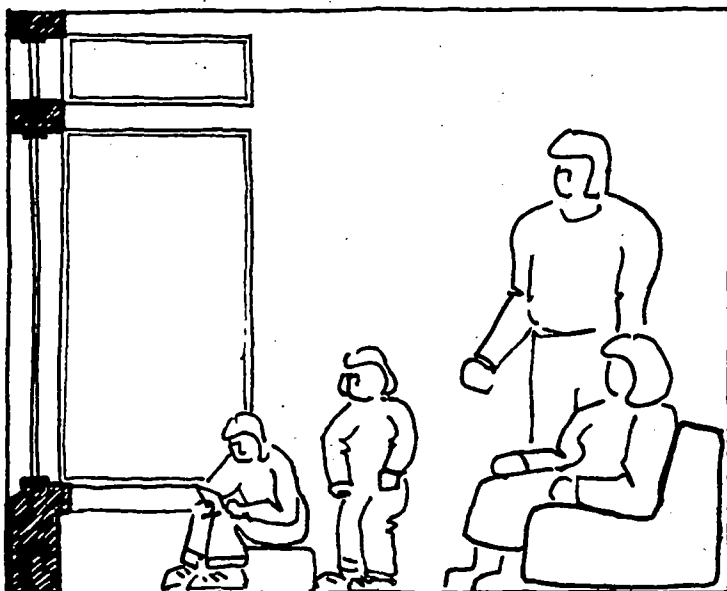
Children like to establish continuous loop routes through the main living areas of the dwelling, using hallways and room circulation. The circulation pattern of the house should be continuous, defined spaces so as to cause as little disruption to more static activities as possible. For example a hall space should continue directly to a back door vestibule and not require movement through the middle of the living room to get to the back yard. Similarly, the circulation path should not go through the centre of the kitchen food preparation area to get to the dining room.





Differentiated windows:  
A sky view, table view, and  
ground view.

One window for the whole  
family: 16" (400mm) sill  
to 76" (1930mm) head



## GENERAL ADAPTATIONS

Throughout the home the following adaptations should be made:

- Windows should be low enough for young children to see out in every room. In order to avoid extensive glass areas in these energy conscious times, this might result in one additional small low window or perhaps one part of a larger window that has a lower sill. Any portion of a window in an upper floor level that is lower than 3 feet (900 mm) should either be fixed glass or if openable, should have a secure railing outside the window.
- Light switches should be placed at 3 feet above the floor (900mm) instead of the conventional 4 feet (1.2m). This is still a reasonable height for adults as well.
- Door knobs can be lowered slightly to 34 inches (860 mm) instead of the normal heights of 36 inches or more.

## Chapter Three

### THE KITCHEN: AN UNTAPPED RESOURCE

3

A number of researchers studying children's environments have noted that kitchens have a potential for providing creative play opportunities for young children. In addition activities such as baking and dish washing, cooking and food preparation in general provide real roles in which children can do meaningful tasks in cooperation with adults. Gaunt emphasizes the value in the early training in a number of domestic skills. Work in the kitchen encourages a broad range of cognitive, social, motor and language development. In her analysis of play opportunities in Swedish family housing, Louise Gaunt observes that better planning of kitchens could increase children's access to that part of the home. (Gaunt: 1978). Cohen et al. also note that kitchens are a natural setting for a variety of learning activities. (Cohen, et al. 1978.)

Anne-Marie Pollowy advocates locating children's activity in kitchen spaces, (Pollowy, 1977, 76). She observes that children will choose to play in close proximity to adults. Since adults frequently use the kitchen as a central gathering place, kitchens should accommodate children.

The idea of sharing the kitchen with children represents a significant departure from current patterns of usage. Promoting children's participation in the preparation of meals and baking requires a change in attitudes as well as some significant changes to the physical environment of the kitchen. Most kitchens are not, in fact, designed in such a way as to provide safe and easy access by youngsters.

The survey of homes demonstrated that many of these households do recognize the advantages of the kitchen as a setting for potentially messy creative activities. Sixteen of the twenty-five households surveyed reported that children regularly engaged in messy play activities in the kitchen. In the survey, messy play included such activities as water play, painting, clay, and other modelling materials. Eleven of the respondents specified that children did arts and crafts work in the kitchen. In fact, in this particular group of households, the kitchen was the most usual location for all such creative play by children. In none of the households was the kitchen considered "off limits" to the children. In addition, four of the respondents stated that when other neighbourhood children come over to play, the kitchen is usually the location of their play activities.

It is also of interest to note the popularity of the kitchen as a setting in which adult caregivers (parents or sitters) participate in play activities along with the children. The questionnaire asked adults to describe such occasions when they join in children's play activities.

Of the 23 respondents who described such joint play activities, there were ten who described such activities located in the kitchen.

It would seem that, with some modification, the kitchen provides a natural setting for supervised, creative play activities in the home.

It will be recalled that the sample of homes in the survey is not assumed to be typical of family households. These homes were selected because they were reputed to provide environments which encouraged children to pursue a wide variety of play activities. It was hoped that the physical arrangements of the survey homes might suggest ways of adapting homes to suit the needs of children. In the case of kitchen-based play opportunities, a number of guidelines are suggested by the survey homes.



## ACCESS TO SUPPLIES

- Provide low storage units for crafts and other play materials in the kitchen.

The lower portion of a kitchen cupboard can be used to keep craft materials within children's easy reach.

A mesh bag of water play toys can be hung close to the sink.

- Provide some storage space which is out of the reach of young children. Thus paints, clay, and other unmixed materials can be safely and conveniently stored until needed.



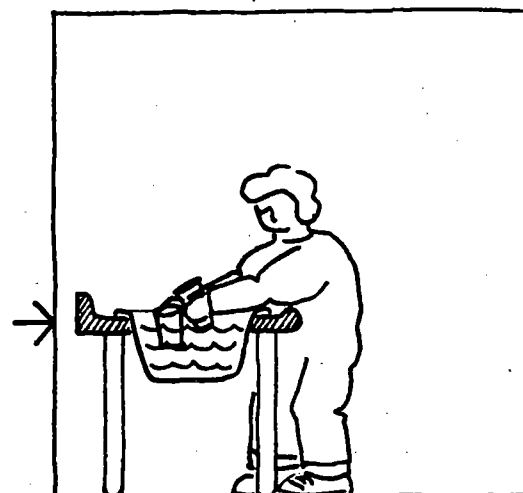
22 inch high work counter with shelves below. Out of reach shelves can start at 4 ft.

## ACCESS TO COUNTERS

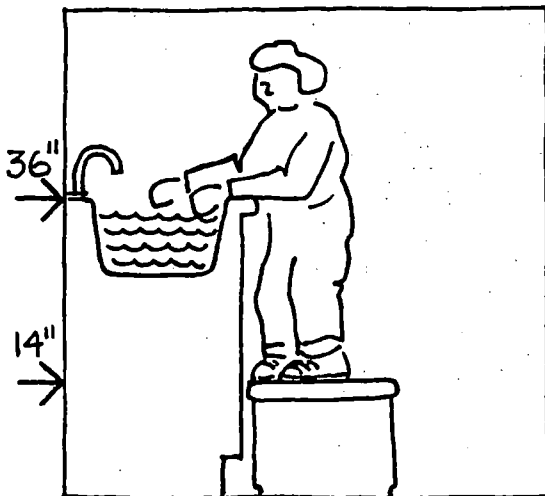
Kitchen activities, whether crafts work or participation in cooking, present problems of access for small children. Counter tops and tables are generally built to adult scale, and children can rarely reach these surfaces with ease. This problem is noted by Louise Gaunt, who suggests that family kitchens be built with some surfaces at a lower height. The appropriate work height for a counter for a preschool age child is 22 inches high (560mm).

A kitchen table made at children's height can fold flat against the wall when not in use.

Plastic tub can be set into cut out in 22" high table



- Another means of giving children access to counters is to provide 12 inch high (300 mm) sturdy wide platforms on which children can stand.
- The part of the kitchen counter that contains the sink can be an island or peninsula counter offering access from the non-working side. This will keep children from underfoot and still allow them to participate without blocking drawers and cupboards.



"Standing before the kitchen sink and regarding the bright brass faucets that gleamed so far away, each with a bead of water at its nose, slowly swelling, falling, David again became aware that this world had been created without thought of him. He was thirsty, but the low lip of the sink rested on legs tall almost as his own body, and by no stretch of arm, no leap, could he ever reach the distant tap. Where did the water come from that lurked so secretly in the curve of the brass? What a strange world must be hidden behind the walls of a house! But he was thirsty."

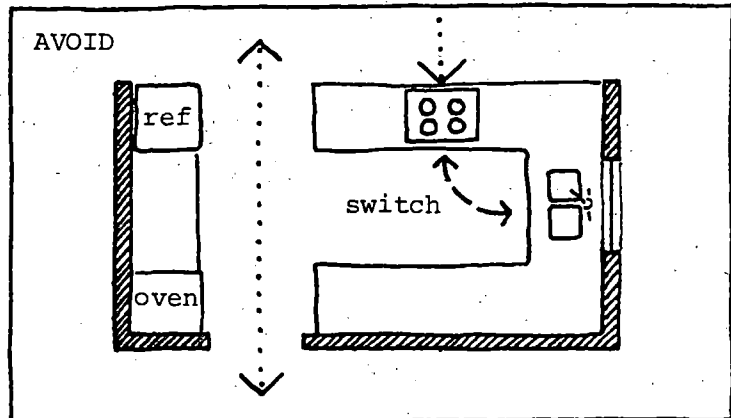
from the novel Call It Sleep by Henry Roth, 1934.

- Kitchen counter and table tops should be of sufficient length and width to accommodate children's play activities. Whether children are assisting in food preparation or doing other projects in the kitchen, they require sufficient counter surface for their activities. It is recommended that a kitchen counter at least 4 feet (1200mm) in length be provided for adults and children to work together in the kitchen. Such a work surface should not be located adjacent to the stove.

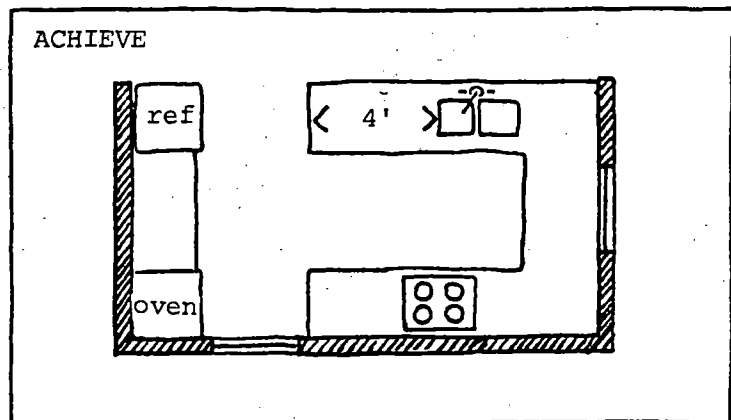
## SAFETY IN THE KITCHEN

Safety is an important consideration when locating children's activities in a kitchen. The following guidelines will contribute to the safety of a kitchen play space:

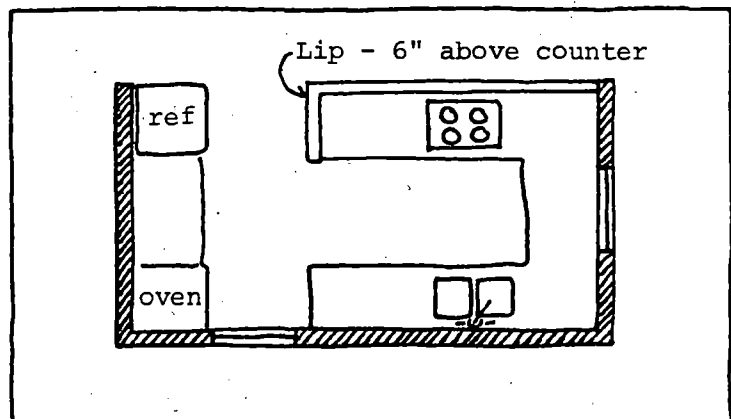
- Avoid placing range top or stove in island/peninsula counter.
- Avoid through circulation in the kitchen work triangle.



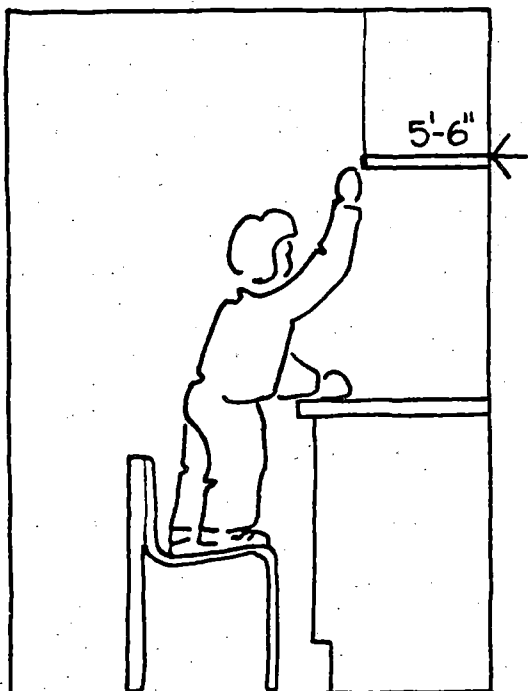
- Place the range top, oven and other dangerous appliances furthest away from the circulation routes through and within the kitchen.
- Make sink and refrigerator accessible without having to enter kitchen work area.



- If the stove top is in an island counter, use a 6 inch (15mm) lip on the back of counter to block children's hands from reaching the stove.



- Store dangerous chemicals out of children's reach - above 5 foot 6 inches (1.75 m), (a 5 year old child's reach while standing on a chair).



## FLOORING AND WALL SURFACES

The survey homes suggested the importance of appropriate flooring and wall surfaces if a kitchen is to be functional for children as well as adults.

- Floor surfaces must be washable and resilient.
- Wall surfaces should be scrubable as well as usable for display of art work, as an easel.

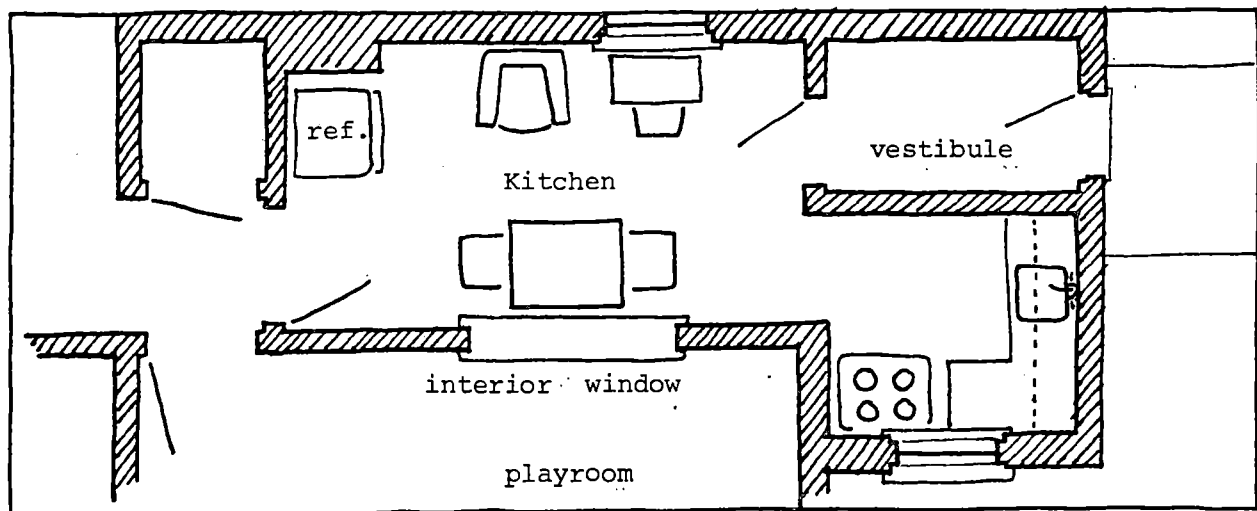
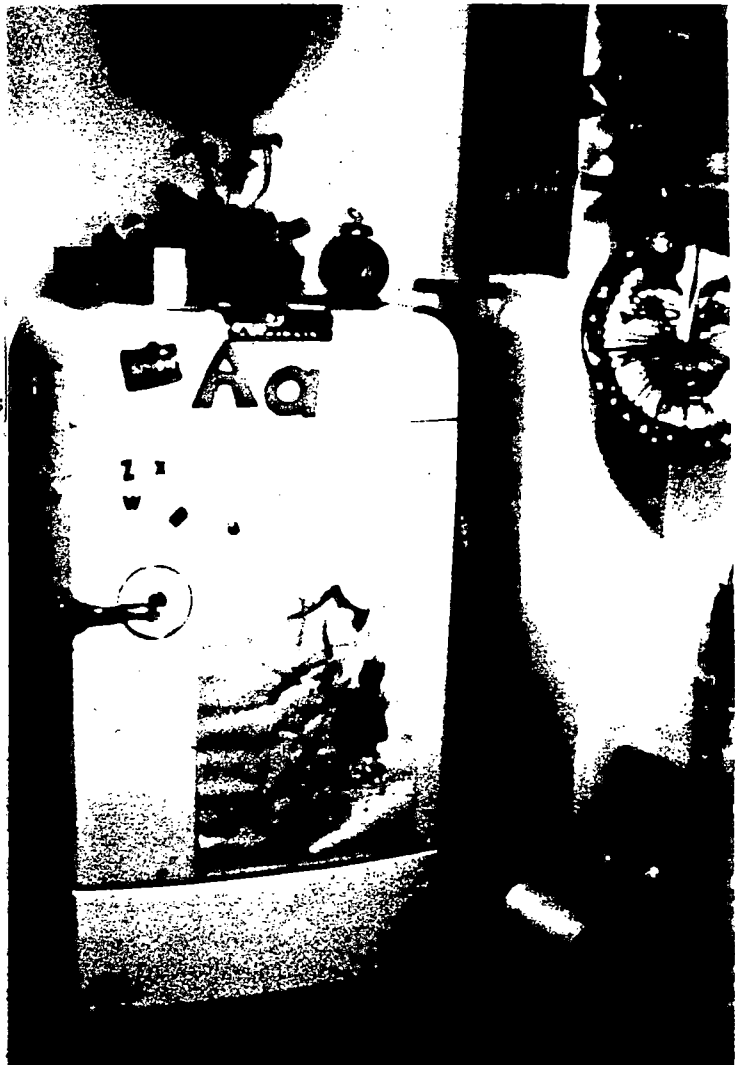


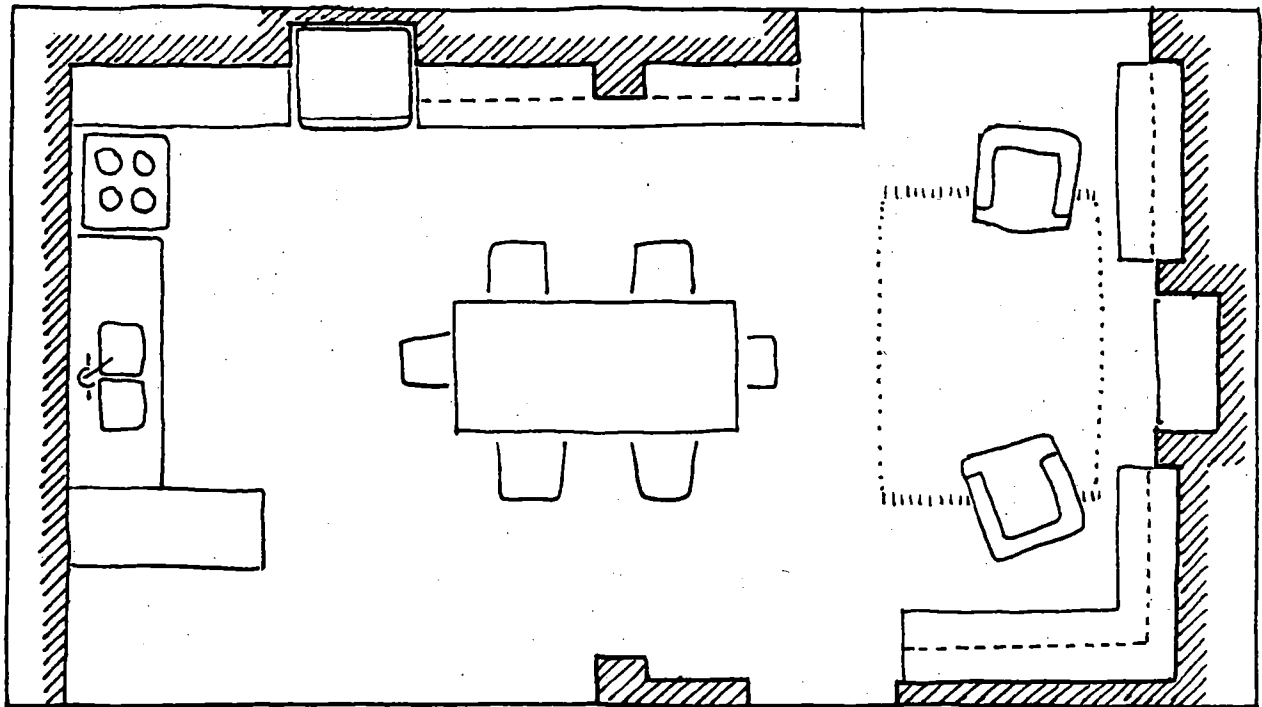
One of the most successful of the children's kitchen play areas was a kitchen which had ceramic tiles on the wall, to a height of 4 feet (1.2m). The tile provided a washable surface, and was used as an easel for children's painting. Paper was fastened to the tile wall with masking tape, and finished paintings were left to dry on the wall. The refrigerator was also used as an easel with paints set up beside it.

The kitchen plan for this house is illustrated below.

A somewhat makeshift but very effective arrangement with a very small work-area.

The positive features of this kitchen were the interior window to the playroom, activity tables of different heights in the kitchen, fridge and walls for easels and display, storage vestibule to the garden.





The kitchen is usually the major living space of this house, although seldom given the form and space it is here. Low storage space is provided around the room. Ample counter table and floor space are accessible for children's work and play in the kitchen. The table naturally divides work and play areas.



## Chapter Four

### BEDROOMS FOR CHILDREN

4

#### AS THE CHILD GROWS

When planning a bedroom for preschool children, it is useful to understand the changing needs from infant-toddler to school-age child. The following is a brief overview of the child's changing developmental needs as they relate to the evolving role of the bedroom in the home.

During early infancy, the child's physical environment is focused on the crib and crib toys. In the second year, as she or he learns to walk, the bedroom environment rapidly expands, encompassing the room as a whole. At this stage, the child's room is a place where sleep and dressing are the dominant activities, since the child cannot be expected to engage in independent play there -- especially if the room is upstairs. The bedroom is a place where a few familiar and favourite possessions are kept, but it does not become a play area until the child can engage in independent play and can safely walk and negotiate stairways. At age three, the child might begin some minor play activity in the bedroom. Such activity would be solitary, rather than social, since group play by three year olds requires periodic adult supervision. Unsupervised play with peers is not manageable until language skills are sufficiently developed for cooperative, social play to occur for an extended period - usually by age four or five.

The six-year-old child desires short periods of play with friends and away from parents or other adult caretakers. Even at this stage,

however, the child still prefers to be close to the action of the family or household for most of the time. At this age, the bedroom becomes one of a number of possible play locations, but is generally not the child's primary choice. In defining the meaning of privacy in childhood, Wolfe and Laufer claim that young children are ambivalent to the concept of "aloneness" since their dependence on others dominates. (Wolfe, Laufer, 1974).

As the child's development through ages 7 and 8 fosters such skills as reading, personal hobbies and other activities, the bedroom starts to become an attractive location. At this stage, use of bedroom space for such purposes seldom occurs for more than an hour at a time. As they grow older, and peer relationships become as important as family contacts, then the desire increases for a room where they can play or work together, away from adults.

By adolescence, they begin to get self-conscious about shutting doors when dressing and having private conversations. The bedroom then adopts a new role as a place of privacy, interpreted as being alone and wanting control of their space (Wolfe, Laufer, 1974).

## A CHILD'S PERSONAL SPACE

It has been argued above that a preschool child's bedroom is not an adequate setting for the main in-home play area. The bedroom is generally away from the main living area of the home, and therefore, is removed from the mainstream of adult daily activity within the home. Preschool children prefer and need to play with in close contact of their adult caregivers -- the bedroom does not provide an opportunity for such contact.



The child's bedroom can, however, provide an oasis which is the personal territory of the child. Regardless of whether the child has an entire room to himself, or a space shared with other children, the bedroom provides an opportunity for a child to stake out some personal territory.

#### ADULT ATTITUDES TOWARD THE ROLE OF THE BEDROOM

The survey results indicate that parental attitudes toward the child's bedroom cover a wide spectrum from "isolation room", i.e., a space where a child is sent for punishment, to "active playroom" equipment with toy storage, as well as the universal activities of sleep and dressing.

It is clear from the survey examples that those families that incorporated play areas into the living areas of the home tended to provide only minimal toy storage within children's bedrooms. In contrast, those families that encouraged play in the bedrooms (one third of the survey homes) apparently did so because they wanted to preserve presentable living areas, free of the mess of children's play and toys.

One-third of the survey homes stated that they did not permit children to bring friends into their bedrooms, presumably because qualities of privacy and quiet were attributed to bedrooms and the entire upper storey of the home, but also because there was a problem in supervision.

In response to the question where do children play alone, only 2 homes indicated bedrooms. The great majority wished some degree of visual supervision.

## GUIDELINES FOR CHILDREN'S BEDROOMS

It is recognized that cultural attitudes will influence the role of the bedroom. Nevertheless, there are some general guidelines which can be applied in order to design bedroom spaces which will accommodate the developmental needs of young children. Although the majority of these guidelines relate to family housing, there are some which apply equally to family day care homes.



## SLEEPING SPACE

- It is expected that each child will have his own bed, but not necessarily his own room. Privacy needs for dressing are not expressed by children of the same sex until puberty, and are not an issue with children of the opposite sex during preschool years. (It is common in day care centres and nursery schools to have shared washrooms for boys and girls).

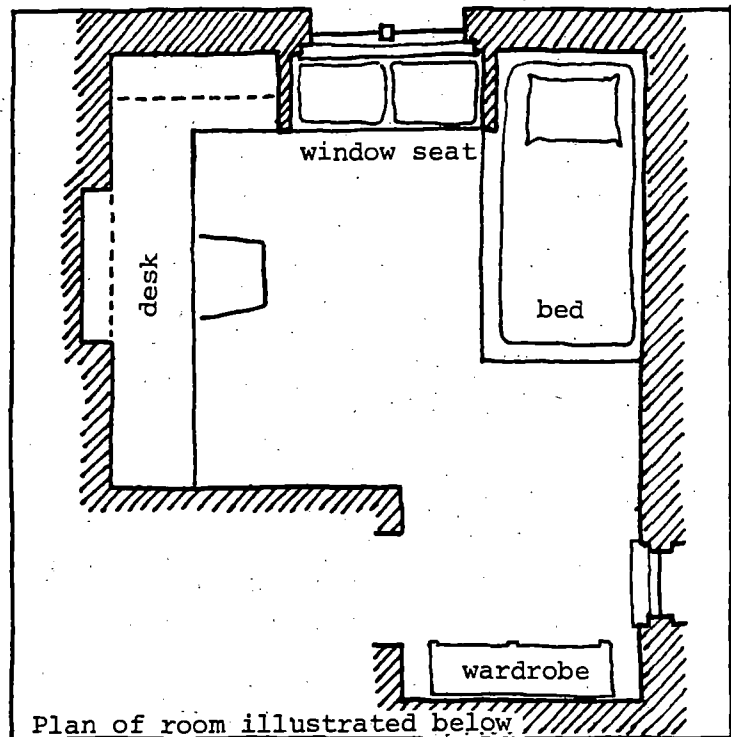
A sense of one's own space is something understood and valued by young children.

The place in which the child sleeps gains special significance, because sleep represents an act of separation and a time of coming to terms with insecurities and fears of darkness and dreams. The bed can be seen as a "nesting place", and a "substitute womb" offering the primal shelter of the home. In a study of children's attachment behaviour, Bowlby describes how children overcome their fears by moving toward the familiar - beginning with a child's special object, then to their bed and bedroom and eventually to the home as a secure base. (Bowlby, 1975).

More than just a place for sleeping, bed-places also provide a quiet setting for individual play, and for reading.

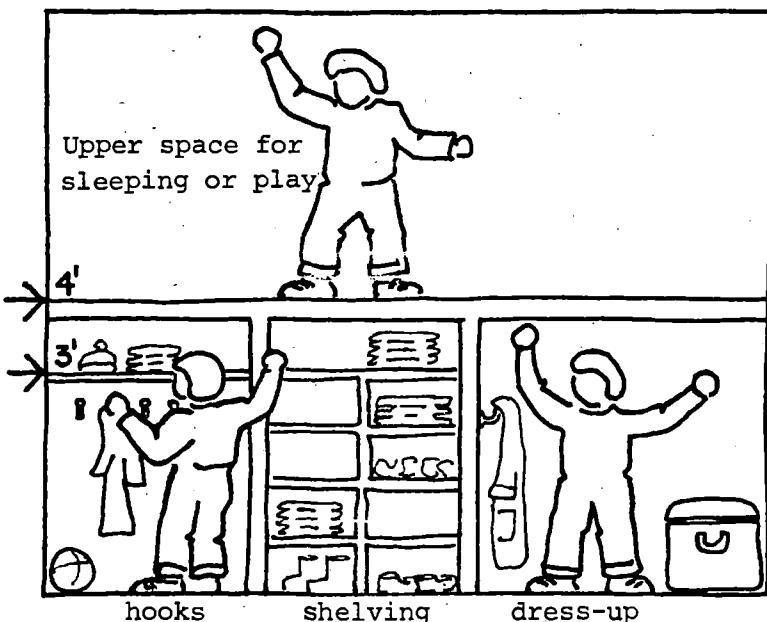
- The bed should be seen as a "bed place", with some sense of place in the room defined by a feeling of enclosure that comes either from placing the bed in the corner of the room, or from built-in shelves or storage walls at the end of the bed. A raised bunk-like bed with storage or play space below, can also create a a sense of place.

- Two or more bed-places can be placed in the same room, thus establishing a personal space for each child. This should be done in such a way as to create adequate open floor area within the room.





Lower rod for children's clothing  
Upper rod for seasonal or adult's clothing



## DRESSING

- Dressing is an activity which can foster independence and dexterity skills in the young child. When individual clothes storage is made accessible to your children, her or his independence in this area is supported. The child's clothing should be placed within his own reach and view (below 36 inches or 900 mm). Each child should have his own shelves or drawers, in order to avoid mix-ups.
- In addition to promoting the child's ability to dress himself, such an arrangement will enable him to put his own clothing away. Shelves that are 16 inches (400 mm) deep and low hooks or pegs for hanging things are preferable to deep drawers and clothes hangers.

Options for clothing storage might include shelves and hooks built into a closet or located in a storage unit, or built-in under a bunk-bed.

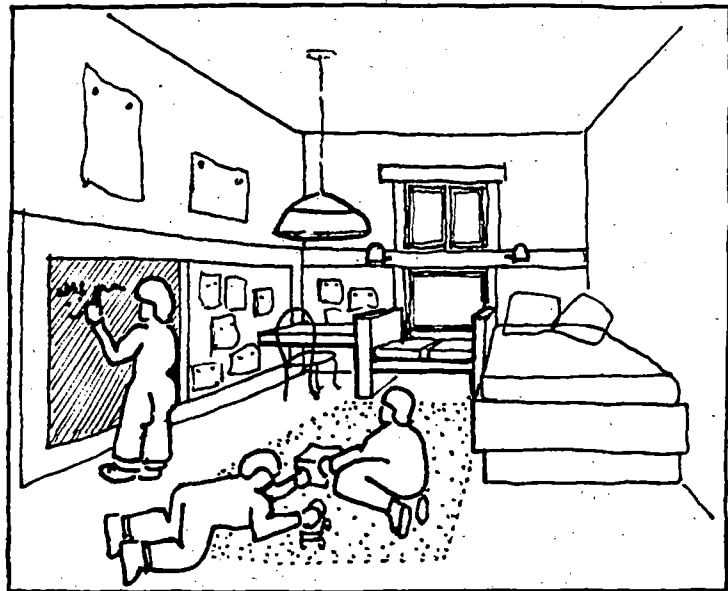
Mirrors can play an important role in the development of concepts of self. During the preschool years this can occur as an everyday part of dressing, grooming as well as the creative projections of self in dramatic play.

- Placement of low mirrors and hair brushes on low hooks also encourage dressing oneself. Such a mirror might be located in a bathroom or hall space related to washing or playing at dress-up.

## PLAY OPPORTUNITIES IN BED-ROOMS

- Bed places, furniture and storage units should be set up so that a maximum amount of open floor space is created for play. An open area of at least 30 square feet (3 sq.m) is suggested for each child using the bedroom, with a space that is at least 5 or 6 feet wide, (1.5 or 1.6m) and as square a shape as possible to be usable.

Bunk beds or raised beds with ladders, and frames to climb can provide opportunity for developing gross motor skills in an appealing way.



< 5' to 6' >

- Children like to have wall surfaces on which they can pin-up pictures or draw. All walls in their bedrooms could have bulletin board or blackboard surfaces within their reach, i.e., within 4 feet (1.2m) of the floor.

Closets can be fascinating play-houses as well, but it is necessary that they have inside door handles and interior lights and switches so that they are not frightening to or dangerous for young children.

"Wardrobes with their shelves, desks with their drawers, and chests with their false bottoms are veritable organs of the secret psychological life." "Like us, through us, and for us they have a quality of intimacy."

(Poetics of Space, Bachelard, 1958.)



## WINDOW PLACES AND LIGHTING

The window, like the bed, offers an opportunity to create a "sense of place" that is in scale with one or two children. By creating a window seat and some sense of enclosure on either side of the window, this can become a very personal place for a child, (perhaps equally so for an adult). It is an ideal place for reading and storytelling, but essentially a comfortable place to be alone and to daydream.

- The window seat should be 12 to 14 inches high, (300 to 350 mm) and could have loose cushions so that the seat might also function as a kneeling table.

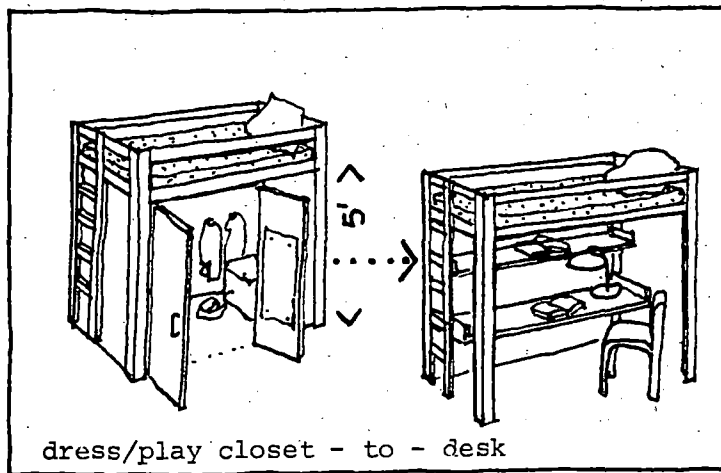
The window sill should be low enough to provide views from a sitting position as well as from standing in the room.

- In order to avoid the dangers of falling out, the part of the window below 3 feet (900 mm) should be fixed glass. In one of the houses surveyed, low casement windows opened in, but an exterior metal railing fixed to the wall, was placed outside the screen for security.

Windows help to define and reinforce places for activity. Children (and adults alike) prefer to work or play or sit next to a window - for the light, views and warmth of sunshine.

The open floor area and built-in seat obviously gain from being placed beside the window.

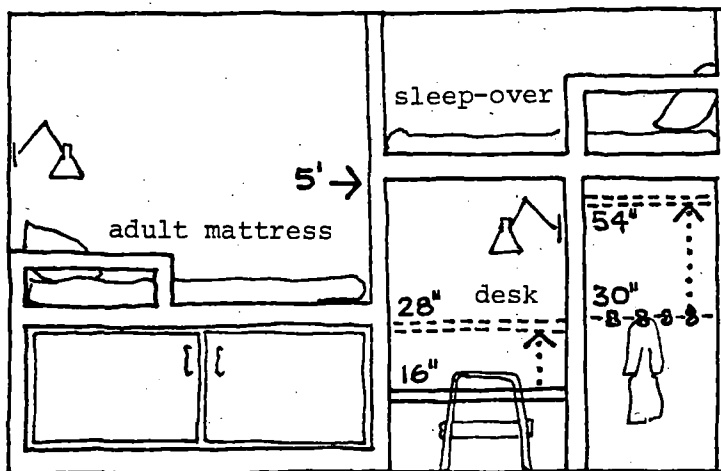
- Carefully placed fixed lights and lamps take over at night to reinforce these activity places. Therefore the "bed place", the "window place", and the open floor area should have pools of light.
- Light switches should be placed within children's reach. Three feet high switches (900mm) are a good height for wall switches throughout the house.



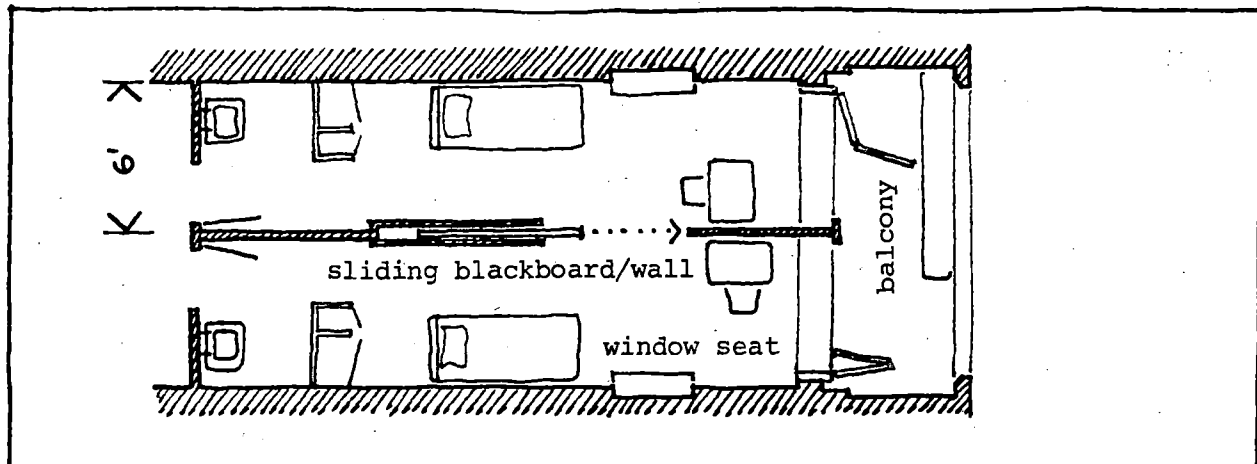
## BUILDING FOR THE FUTURE

When building-in beds, work-tables, and other furniture, it is important to imagine how older children will be accommodated by such equipment.

- When children get a little older, they like to have friends sleep over. The bed arrangement should be able to accommodate an extra mattress.
- If 2 children share a bedroom initially, some means of dividing the area for future privacy in adolescence should be devised, so that each has a separate cubicle with her or his own window.



L'unité de habitation (Marseille Apartment), Le Corbusier, 1952





## Chapter Five

5

### CHILD OF ALL SEASONS: OUTDOOR PLAY

All of our survey homes encouraged outdoor play in good weather. In most cases little imagination was applied to winter activities, so there is certainly a time of year when outdoor opportunities are avoided, thus putting unnecessary pressure on the indoor areas for gross motor and construction activities. Even in the summer period though, most of our survey homes limited activities out of doors to more active play such as tricycles, swings and climbers, and sand play. Very few offered activities such as painting, construction, gardening. Generally, it would seem that those activities which adults believe require less supervision or less effort to set up, are those that are encouraged. However, it is probably from a lack of imagination and information that such opportunities for creative and explorative play are neglected, since they would require less supervision and provide more freedom for the child than in an indoor setting. As well, outdoor work tasks such as gardening and watering the lawn are real work opportunities in which children can participate, cooperatively with adults.

#### TYPE OF OUTDOOR PLAY SPACES

The back yard in our survey homes are the preferred setting for outdoor play, for reasons of safe enclosure for young children. Culturally, the adult image of house would tend toward keeping up a tidy front as a public face, while

using the backyard for such private and household activities as hanging out laundry, sun bathing, vegetable gardening, sleeping, and barbecuing. These activities are generally not considered acceptable in the front yard.

Although young children do not share the same prejudices regarding appropriate front and back yard activities, there are differences in the suitability of front and back yard areas for various types of play activity.

The following pages will discuss ways in which various outdoor spaces can be adapted to meet children's developmental needs.

In a British study on play, Hole documented the tendency for all children and especially young ones to play close to the front door of the dwelling - "doorstep play". (V. Hole, 1966)

In some cases, side yard areas may be extensions of front yard, for example on driveways.

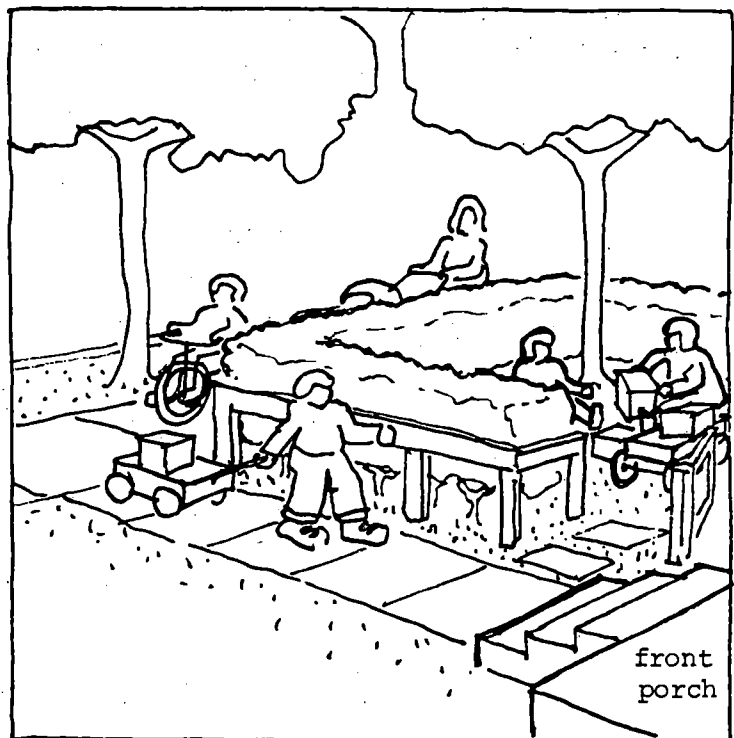
- Toddlers require more supervision in front yard areas, but the value of social contact warrants the creation of an enclosed area such as a front porch for very young children.

## IN THE FRONT

The territory outside the front door, is the place where children make contact with their friends. The front of the house affords a view of others who are out to play. Sidewalks are hard surfaces where preschoolers gather with tricycles and wagons, and where they can participate in the action of street life.

Cohen et al. reported that home based outdoor play generally occurred in the streets, front porches, behind housing. This research accepts front yards as the most social side of the dwelling, recommending that "front yards have some subdivision that defines a protected area for play and partially screens messiness and disorder from view". (Cohen 1979: 208-7).

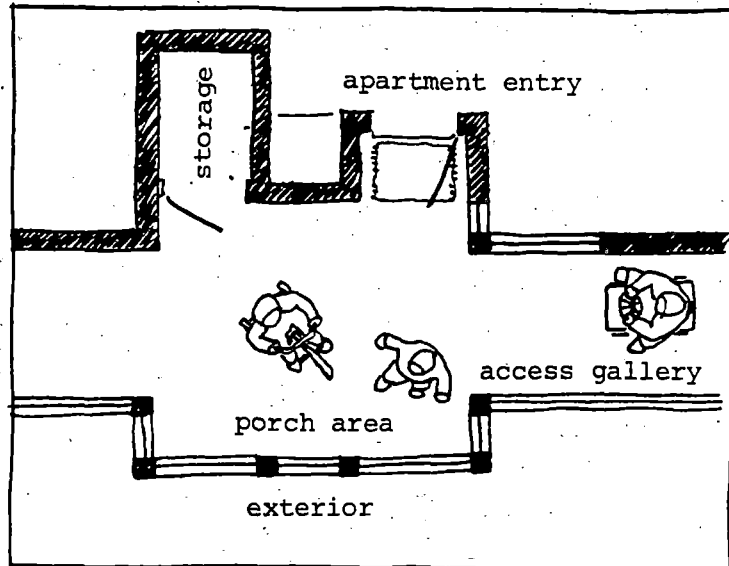
Front garden with protected children's play



- In apartment housing, the equivalent of a front porch should be created as an expanded part of the hallway or corridor located in front of the apartment entry. This area should have windows providing daylight and natural ventilation. This is achievable in those forms of dwellings that have access galleries or are grouped around common stairs.

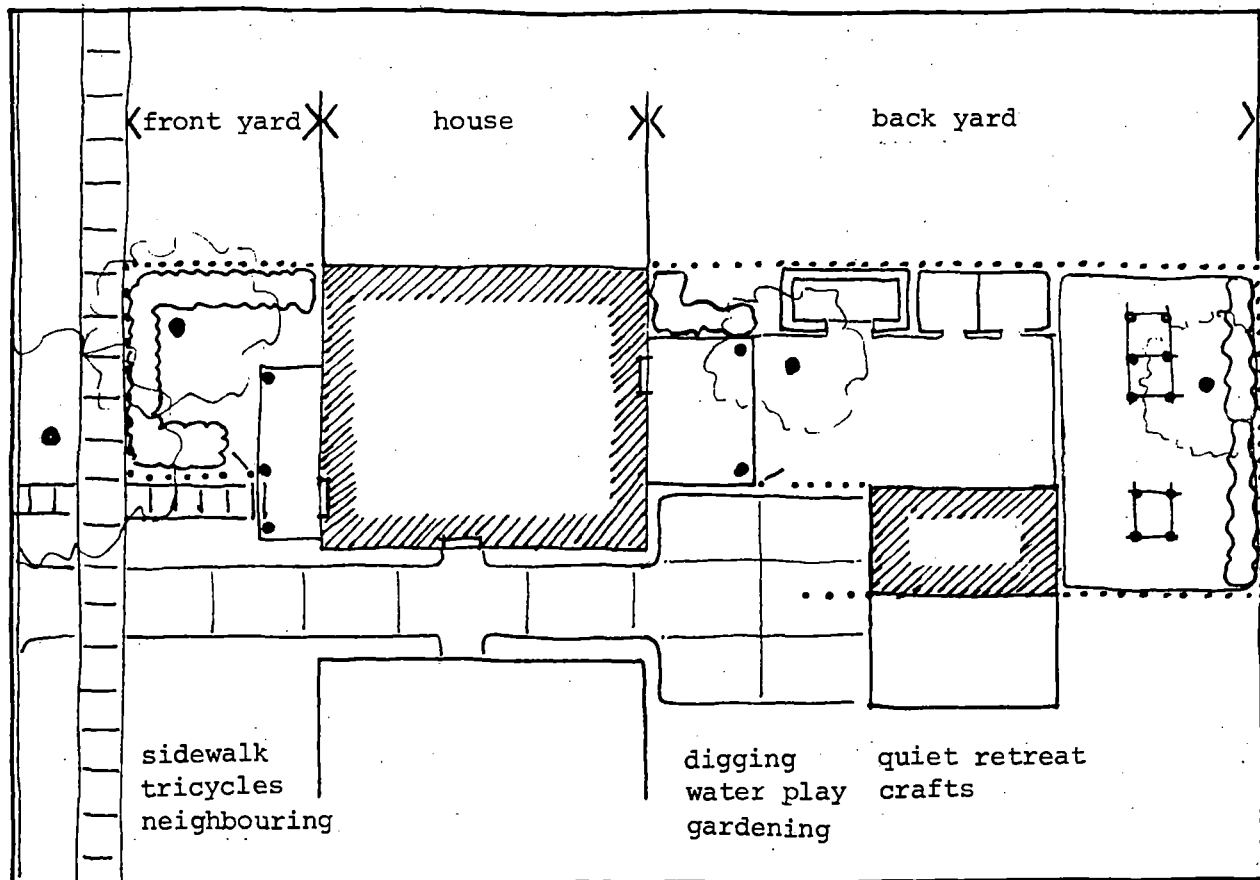
- Windows, from the apartment to such hall spaces, should be created for supervision.

- A storage cupboard for tricycles and prams should be provided at each entry.



Apartment "porch"

Back and front outdoor play areas

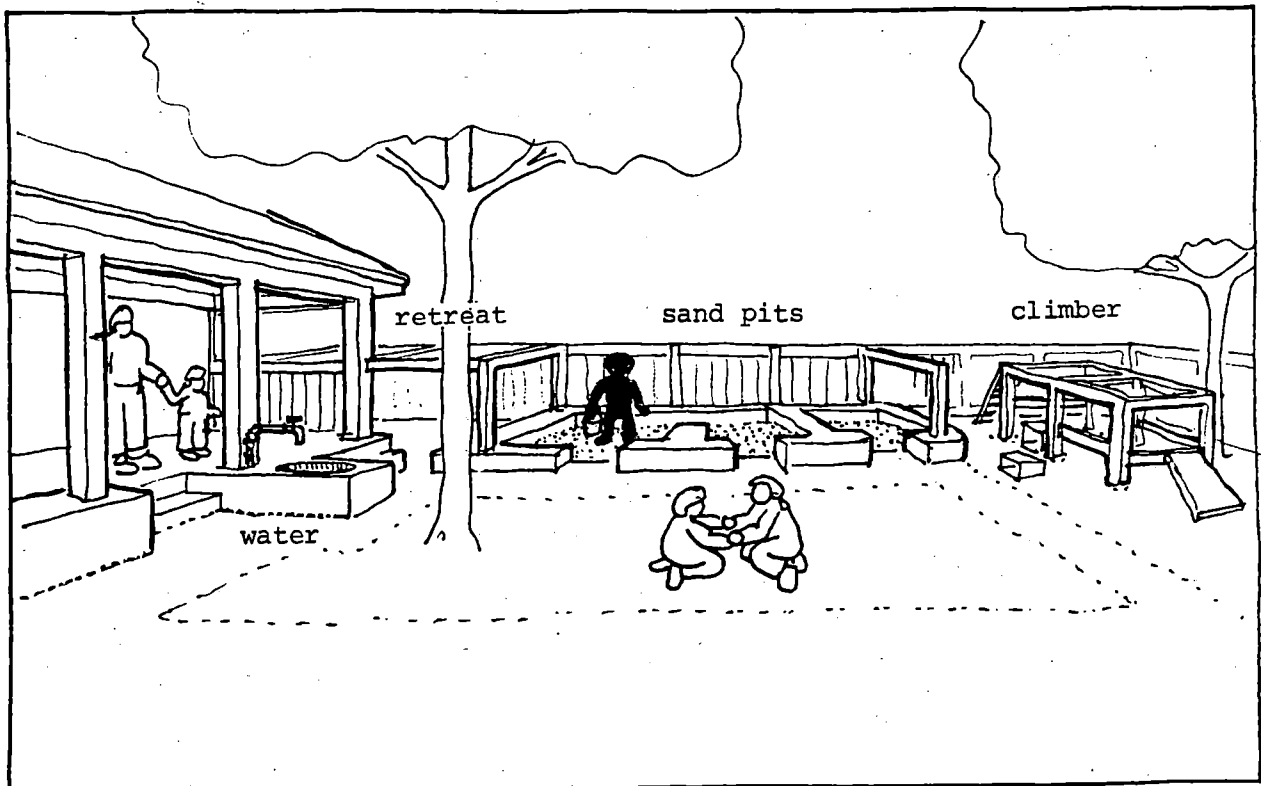


## IN THE BACK

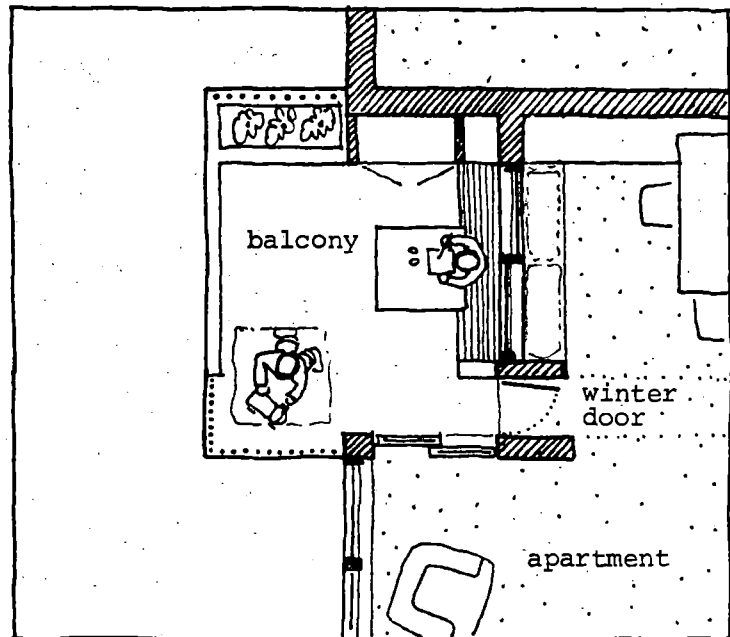
Backyards should be enclosable with fences and gates to enable independent play without the presence of an adult. Backyards are ideal places for those activities that require more a private setting and some degree of individual concentration, free from the noisy distractions of active group play. Examples of such activities include arts and crafts, gardening and construction activities, as well as eating and sleeping outside.

- The equivalent 'back' space in an apartment is the balcony. Every apartment should have a covered balcony that is usable as a play terrace. It should be more square in shape (long narrow ones are difficult to use), large enough so that a table can be placed on the balcony without being close to the railing (to avoid children climbing onto the railing).
- Since railings are above eye level of preschool children, at least part of the railing should allow a view to ground level.

Possible back yard play areas

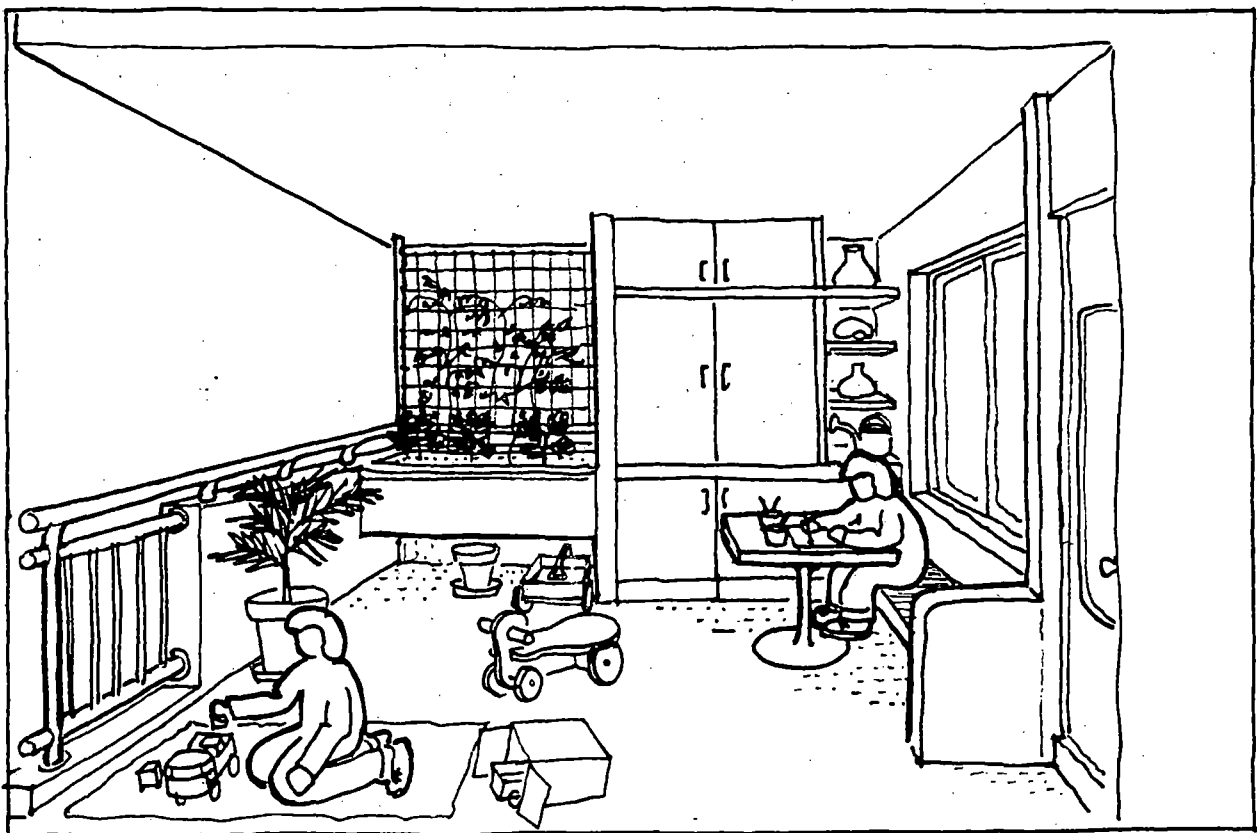


Apartment balcony with: storage  
cupboard, planter, railing that  
provides view, table and bench.



Possible plan of apartment balcony

Illustration of plan above



## ACCESS AND STORAGE

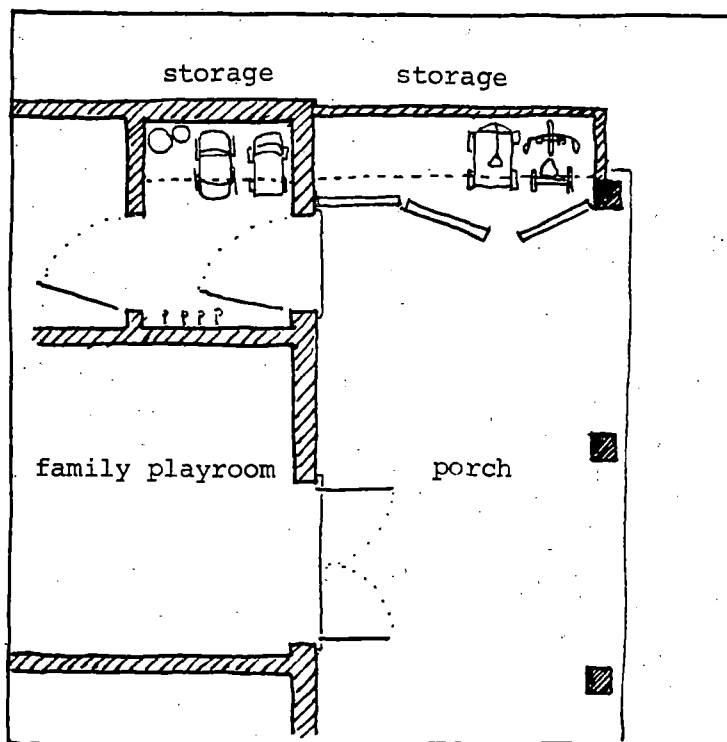
Access to outdoor play areas requires that children can exit and enter through an area which is not the "best room", i.e., a room with furnishings which might be harmed by the children (Pollowy, 1977:55). Pollowy observes that although preference has often been shown for locating the entrance in the kitchen, it may be more appropriate to use a room or hall space which can provide storage space for outer clothing and muddy or wet footwear.

It is awkward to transport outdoor play equipment from indoors to an outdoor play area on a daily basis. In fact, if storage is not made available, or is too distant, it is unlikely that equipment will be used outdoors on a regular basis. The most successful and most heavily-used outdoor play areas, in our survey homes incorporate outdoor storage facilities.

One of the best designed storage units observed in the survey was a bicycle and tricycle shed built at ground level with a second storey playhouse unit above.



- Storage areas for outdoor toys and equipment should be located both indoors and outdoors. Indoors, small items such as balls and smaller wheeled toys would be stored. Outdoors, larger wheeled vehicles, sleds and garden tools would be kept. Storage sheds can be built as play structures.



indoor/outdoor storage  
vestibule access to outdoors

## SUPERVISION BY ADULTS

- Outdoor play by preschool age children must be subject to supervision by adults. Young children's play should be within both sight and sound of their adult caregivers. This requirement is based on both the physical safety and well being of children, as well as the child's sense of security while at play. (Benatissou, 1970)
- Young children also need to be able to see their homes from a play area, (Pollowy, 1977). A study by Holme & Massie (1970), also stress the importance of play areas within sight and sound of home.
- One opportunity for supervision is provided by placing windows, overlooking play areas, in the rooms which are most used by adult caregivers. In this regard, one suggestion which has been made repeatedly is to locate kitchen windows so that they overlook play spaces. (Pollowy 1977, p.56).
- This could be achieved in apartments as well, overlooking shared hallways or access galleries.
- This contact is especially critical in apartment houses where public playground areas are necessary for outdoor play. Although some specific distance guidelines have been proposed for locating play spaces for preschoolers, such as the criterion of the 100 metre route from home (Stichting Ruimte, Norway, 1979, p.3, and CMHC, 1978), most researchers recommend, as does Clare Cooper Marcus (1975,

p.233) that play areas must be located within sight and calling distance of parents or other adult caregivers. This in fact is more likely a distance of 100 to 150 feet. (30 to 45m) Cohen et al. (1979) go further to emphasize the need for low-rise, walk up access. 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. (Cohen, et al. 1979, 506-3).

## SAFETY

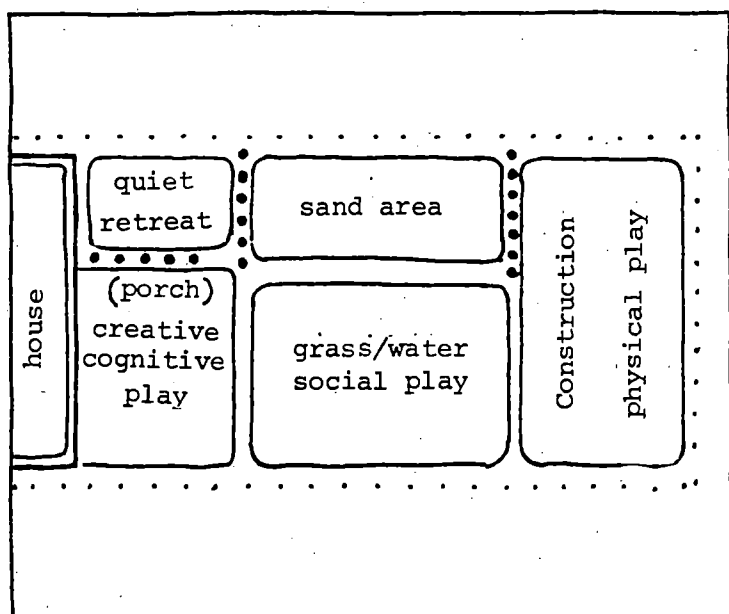
- Children of younger preschool age require barriers to confine them within a secure outdoor play area. Outdoor play spaces require adequate fencing to provide this protection. Pollowy notes that fencing is particularly important for young children "up to the fourth year where children enjoy climbing but are not mature enough either to recognize potential hazards or return to home base with assistance. (Pollowy 1977, p.56).

The survey inquired whether respondents has made, or planned to make any special changes for the children out-doors. The most frequent response given was that they had fenced in a yard or intended to.

## DEFINING ACTIVITY AREAS

In outdoor play as with indoor play, activities have the potential to compliment or conflict with other activities (Osmon, 1971). Trikes and other wheel activities are best located on paved surfaces in open areas. Creative play areas including arts and crafts and sand and water play are compatible and may be located in adjacent space making use of some of the same storage facilities and materials. Private spaces can be founded by partially-screened plant materials, removed from the more active gross motor areas. The CMHC publication on preschool playgrounds describes solutions for more public preschool play areas with the need for defining separate activity areas within them. (CMHC 1978 ).

General activity areas required





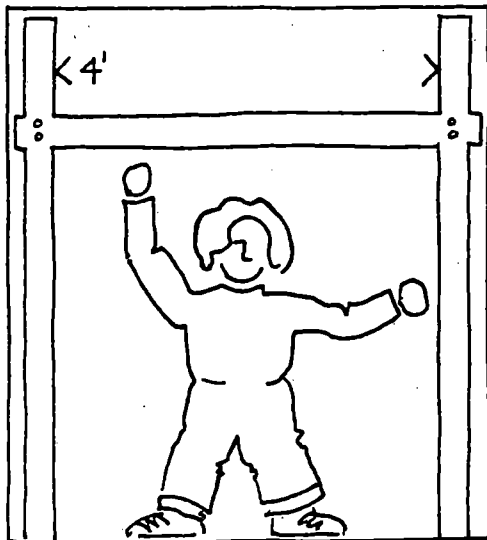
## OUTDOOR PLAY ACTIVITIES

Daily outdoor activities can complement and extend indoor play. Not only is there the joy of sunshine, puddles and the magic of snow but as well the exuberance of greater movement and freedom to play in sand and water with fewer restrictions.

- Providing play opportunities at a variety of height levels can create interesting environments for outdoor play. In addition, it can maximize the available space in small-sized yard areas.

Children should have a variety of activities offered to them at different skill levels. The outdoor play environment, like the indoor, should function to offer to the child a range of experiences - simple with challenging and stretching. (Cohen et al. 1979).

4' x 4' module

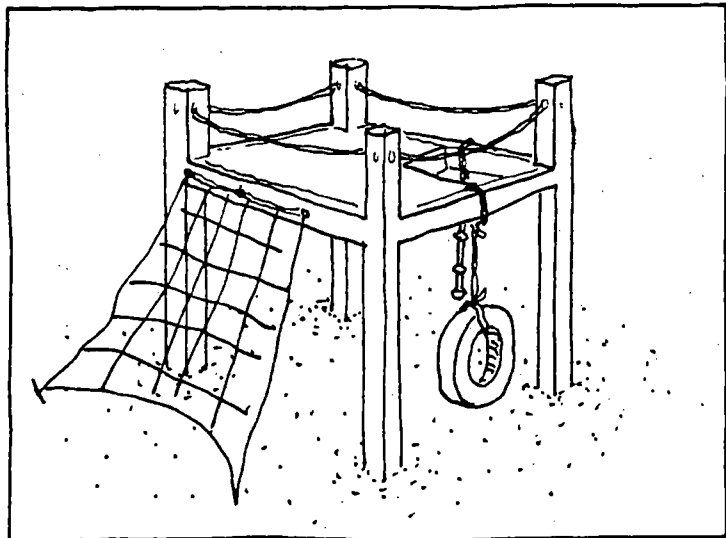


## GROSS MOTOR PLAY

Gross motor play, aids physical fitness as well as being critical in perceptual development, and serving as a basis for later cognitive development.

- Gross Motor play for the younger preschool child (3 and under) emphasizes balance, and coordination activities. For the older preschooler, a variety of climbing, swinging activities may be added.
- Provision of materials for gross motor play might include climbing frames, tire swings, cable spools and rope swings. It is preferable to locate this equipment on such soft surfaces as sand, grass or dirt.
- Wheeled vehicles and other push-pull toys are important equipment for gross motor play. Hard surfaces such as sidewalks are essential for wheeled toys.

A simple 4' cube frame can be added to with ropes, tires, ladders, etc.

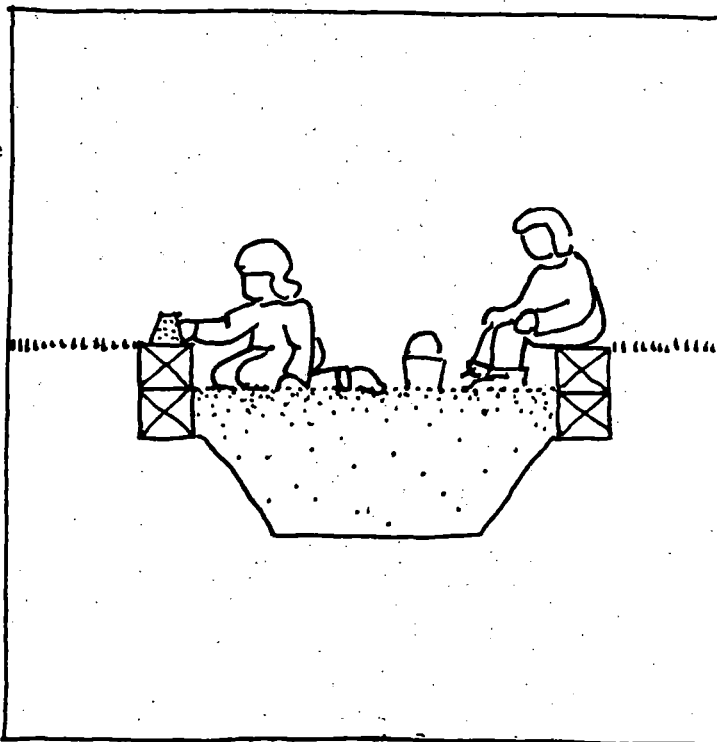


## SAND PLAY

Sand play is a "natural" for outdoors. The experience of a material which a child can manipulate and mold and dig provides much sensual pleasure and learning by measuring with containers, etc.

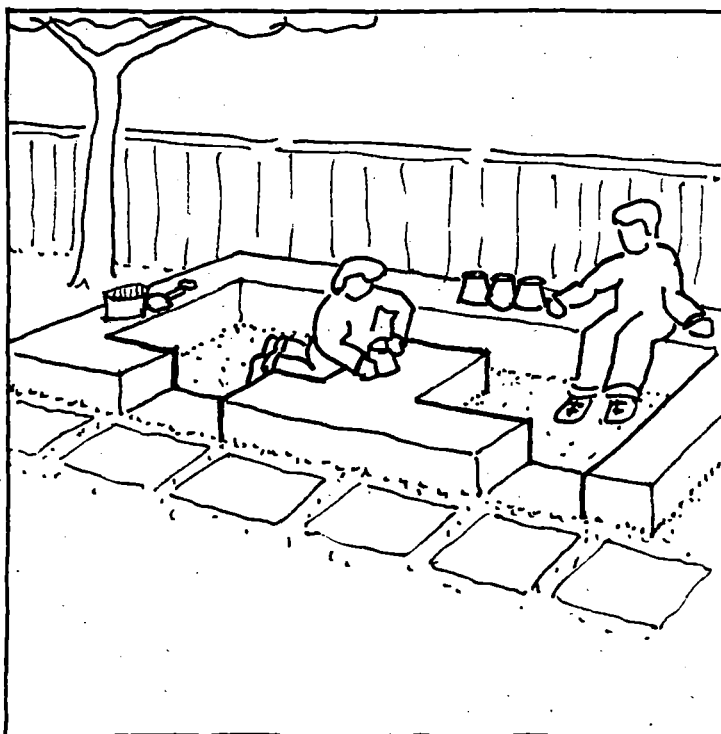
### ENVIRONMENTAL REQUIREMENTS

- Sand must be bounded or contained using a wood or concrete edge, so that the level of the sand is 6 or 8 inches lower than the surrounding edge. This is intended to keep the sand from spilling out of its contained area. As well, wide edges, can provide a ledge for sand molding. Sand can be set into a small container, for individual play, such as a tire set into the ground, or can be put in a larger "pit" for group play, where the edges of the sand pit are level with ground. A water source should be close by.
- A variety of additional play equipment can extend sand play to its creative maximum, and should be stored close by. One suggestion for storage of such toys in a wood box in the corner of the sand area with a hinged top that can double as a seat. Sand might have to be protected from neighbourhood cats. A wire screen nailed to a frame is one simple solution.



Section through sand pit. Edges are level with ground.

Sand pit with raised edges and sand table



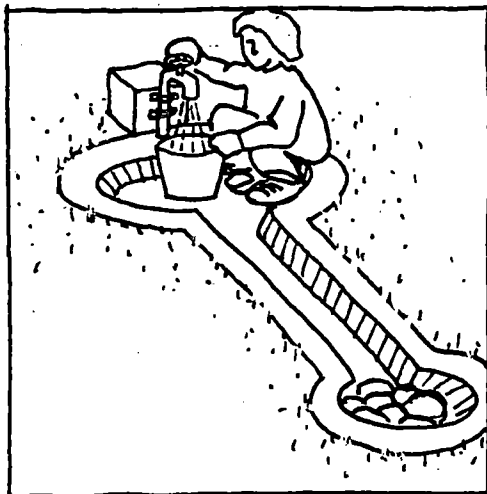
## WATER PLAY

Water play is an important and natural element on its own as well as in combination with sand and or dirt. Water activities play a role in cognitive, perceptual motor and social development.

### ENVIRONMENTAL REQUIREMENTS

- An outdoor water tap and a collecting basin, set into the ground or above, are the essential requirements for water play. A rubber hose and a variety of sprinkler attachments allow unsupervised safer water play than wading pools.
- Sailing boats, syphons, bottles for pouring, paint brushes (painting with water) cup with spouts etc., will extend water play. It is valuable if children can control (to some extent at least) the off/on water source.

Water tap, basin and trough



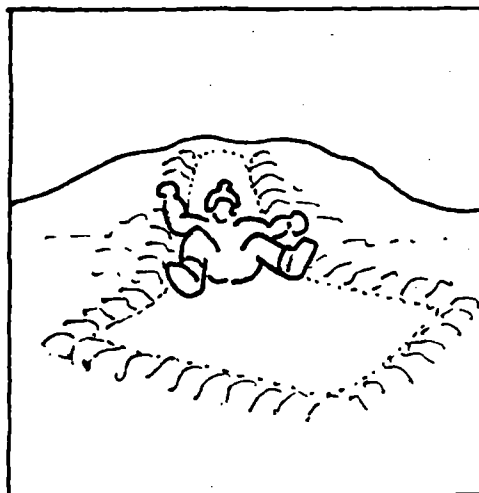
## SNOW PLAY

Snow play is the winter counterpart of water play and construction play for Canadian children. Opportunities to build, mould, and even paint snow (with squeeze bottles of paint) are as varied as a child's imagination.

### ENVIRONMENTAL REQUIREMENTS:

- A small portion of a back-garden can be flooded for ice play and skating using snow banks to form the rim. If there is space in the yard, creating even a very small grassed mound will provide snow and ice slides in the winter.

Ice slide onto a patch of ice

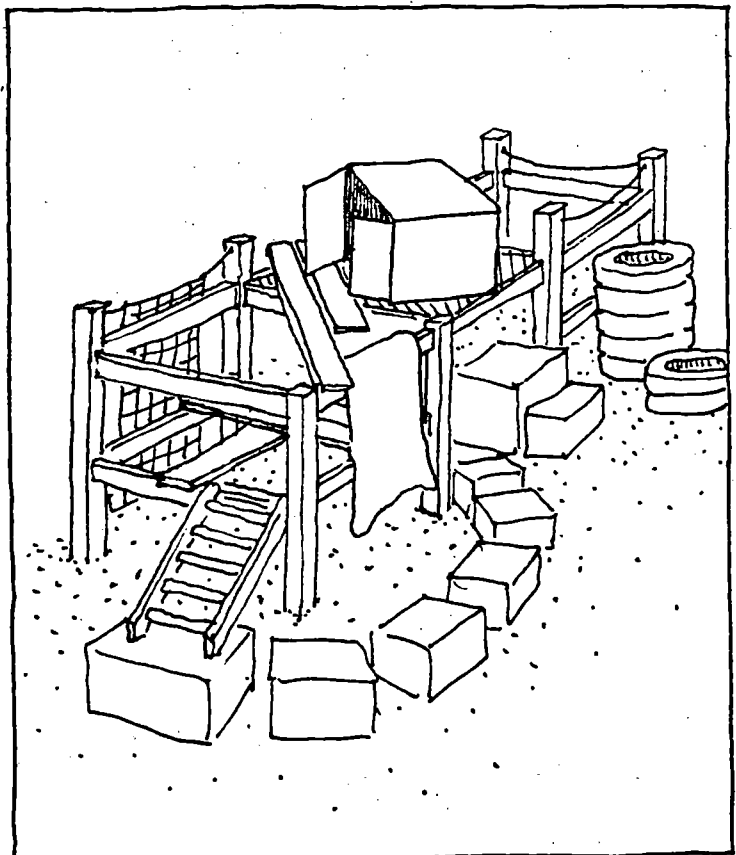


## CONSTRUCTION

Building with wood and the manipulation of loose materials affords endless possibilities for creativity. Fine motor and perceptual-motor skills are also enhanced.

### ENVIRONMENTAL REQUIREMENTS:

- Provide a variety of raw materials which can be assembled in different ways: e.g., packing crates, boxes, loose boards, ropes, etc. Small saws, hammers, screwdrivers, wood glue, sand paper, work bench, are essential tools. Close supervision is essential when tools are involved.
- A specific area needs to be designated since construction projects tend to go on for a number of days.
- A permanent wood frame, providing a 4 foot cube-structure can be a starting point for an ongoing construction of an ever changing playhouse/climbing game.



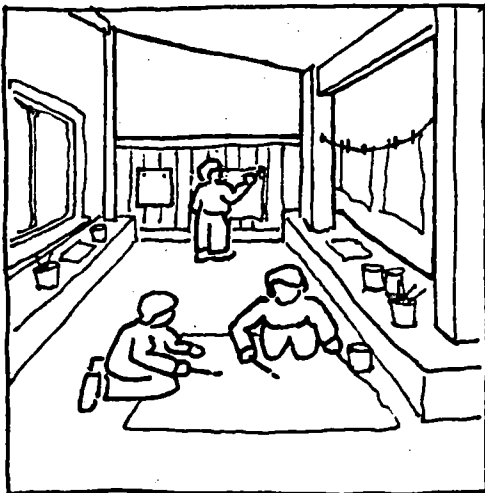
## ARTS AND CRAFTS

Arts and Crafts have many purposes including physical, social, emotional development. Creative expression is also nurtured by the use of art experience. Outdoor arts and crafts can work on a larger dimension such as painting with water on pavement or wood fences, chalk drawings on pavement, sand casting, etc.

### ENVIRONMENTAL REQUIREMENTS:

- An outdoor arts and crafts area is an extension of its indoor counterpart. A sheltered space is required such as a back porch or deck with a variety of surfaces, such as picnic tables, easels, wood fences, floor storage space and a water source are essential components.
- An area removed from most active spaces will permit better concentration and less disruption.

Arts and crafts on the porch



## PLACES TO PAUSE

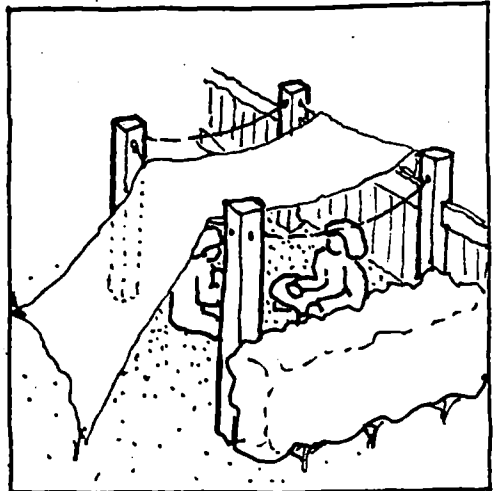
As discussed earlier in the chapter on indoor play, children require an opportunity to get away by themselves.

Small children appear to enjoy involvement with small groups of children (3-4) as well as opportunities for solitary play. An outdoor space can and should provide for both types of play.

### ENVIRONMENTAL REQUIREMENTS:

- A semi-secluded place where a child has visual access out, will permit a sense of privacy, without fear. Enclosed spaces can be part of a playhouse, or an elevated platform. Bushes can also be planted to create private areas. In one of our survey homes, children planted beans around the base of a "teepee" frame structure. The beans grew to cover the teepee, forming a playhouse which the children used during the summer.

A retreat



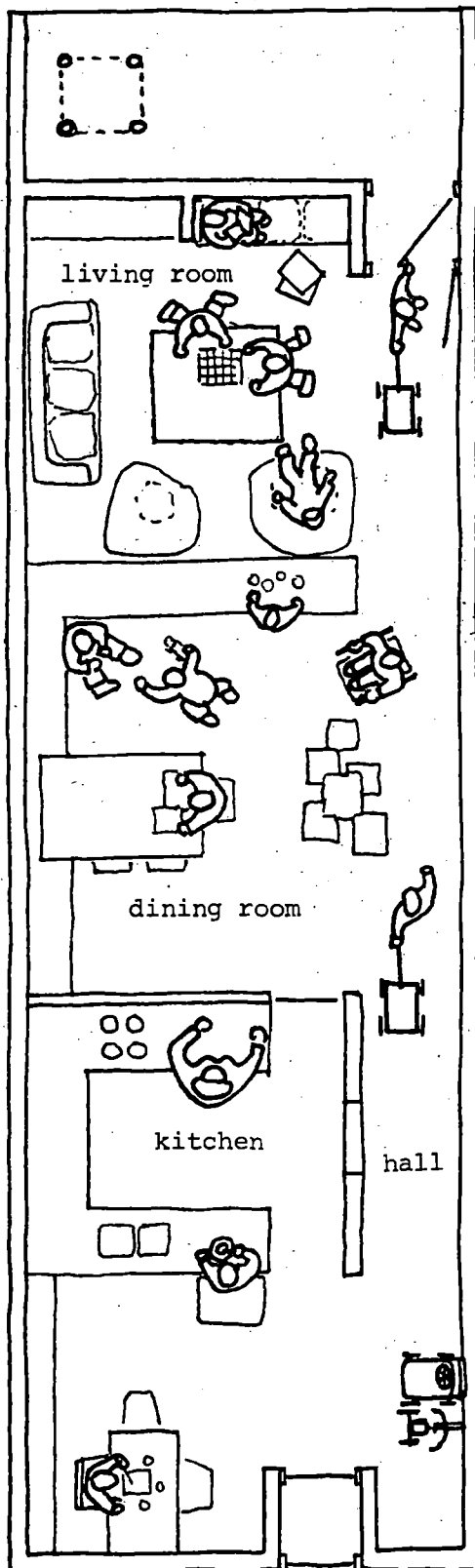
## Chapter Six

### DESIGN PROPOSALS FOR 'MODEL' HOMES

6

This chapter develops two acceptable models for organizing the dwelling as a whole. It then goes on to propose plan-diagrams that illustrate some guidelines for organizing the home so that either model might work. These guidelines are intended to allow interpretation by different cultural and family structures. As well they provide choices within a family - for daily changes in how spaces of the home are used, and for longer term changes as the children (and adults) grow up with different needs related to age and personality.





## MODEL 1. (Acceptable)

### CHILDREN'S PLAY INTEGRATED

Assumes: No room is segregated "for adults only". Children use all living spaces of the home. Limits are placed on which activities can take place in which room.

Each room on the living level of the home has some floor space and table space that is usable for children's activities (although not just for children).

Adjacent to each area would be low children's storage units, containing specific "props" to direct certain activities to appropriate rooms. For example:

- Kitchen - water play, arts & crafts, cooking.
- Living Room - reading, coffee table games, music
- Dining Room - puzzles, building blocks, larger floor space if table is pushed aside, playhouse under table
- Hall - larger wheeled toys, dramatic-play closet.

## MODEL 2. (Acceptable)

### FAMILY-PLAYROOM ON THE MAIN FLOOR

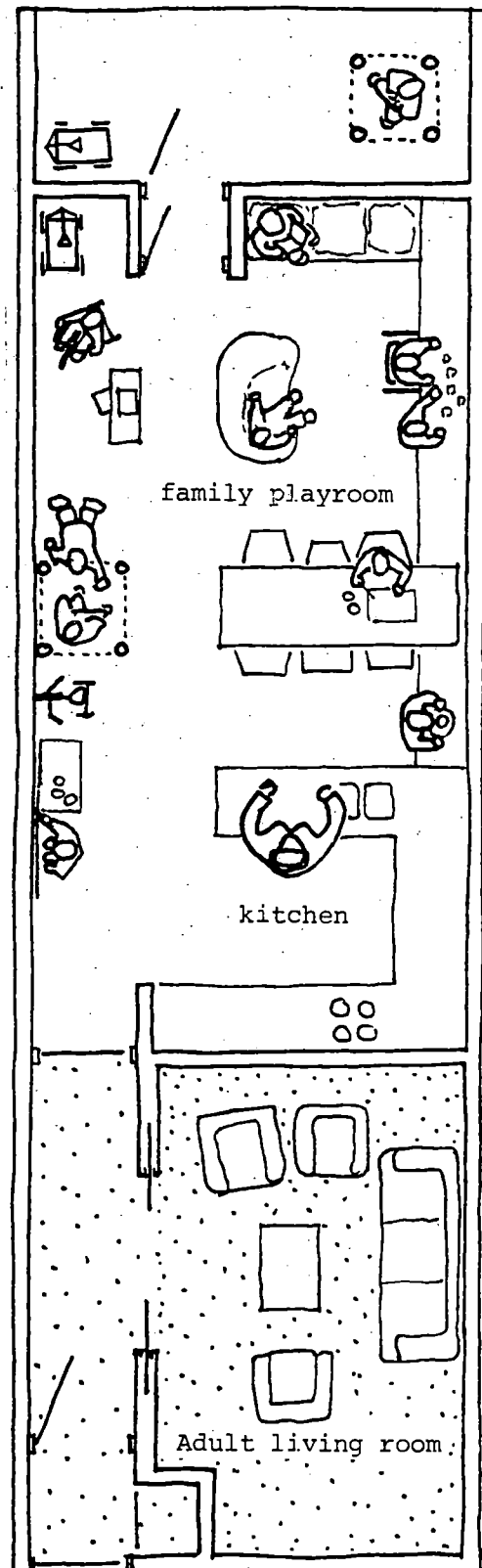
Assumes: The living room is the one area kept as an "adult preserve" or maintained as a "tidy front parlour". The family playroom is adjacent to the kitchen and any family living areas. (A playroom in the basement is the situation described in Model 3). Pre-school children and adults wish to be in close contact throughout the day.

A family-playroom is made by changing one of the living spaces, likely the dining room (if there is no extra room available). A room such as a dining room would be forfeited for a few years, until the children are old enough to desire to play away from adults.

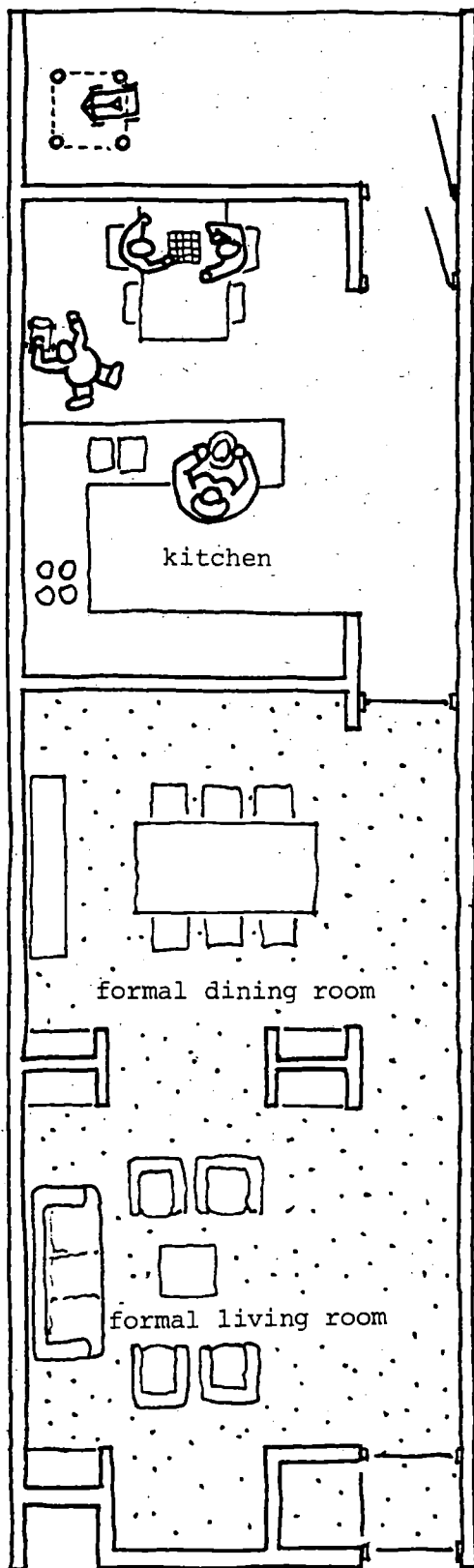
The living room must be able to be closed off from the family-playroom (although wide doors might connect them on special occasions).

The family-playroom requires visual contact with the kitchen. This may result in an open kitchen-playroom, or more simply, cutting a large opening in the wall above counter height to make an "interior window".

The kitchen must have substantial space for family dining to compensate for the loss of the dining room. The kitchen area would also be used for children's activities requiring water, such as water play, arts and crafts and cooking.







### MODEL 3. (Unacceptable)

#### SEGREGATED PLAYROOM IN BASEMENT OR BED-ROOM LEVEL

Assumes: The whole of the main floor is either an "adult preserve" or maintained as a "showcase". Adults will need to create additional living spaces (e.g., basement family room) in order to keep contact with very young children in their playroom.

Because the kitchen is the main centre of household activity, any play areas out of touch with the kitchen are unacceptable.

Models 1 and 2 present situations in which some degree of integration of children's activity is accepted as the norm of real family life. We would claim that Model 3 only works when a whole set of family rooms is created in addition to the formal preserve, to sustain the informality of daily life.

In all three Models there is the problem of accommodating both children and adults in the family so that one does not compromise the needs and rights of the other. This is a difficult problem in coexistence, which can be greatly relieved by organizing the house to provide choices for activities to go on in parallel. For example a mother could choose to be involved with children's play or just casually observe while carrying on her own tasks. Similarly children might choose to find a corner where they can play alone away from the centre of activity, but still within hearing distance.

## DESIGNING THE DWELLING TO ACCOMMODATE CHOICE

This is a problem in obtaining reconciliation between opposites. What the architect van Eyck calls "closely linked twinphenomenon," in which an architectural form is articulated to accommodate two polarities such as the individual and the collective. (van Eyck, 1961)

Children's needs	Adult needs
Children playing together	Adult relaxing off to the side
Some children by themselves	Some children with the family
A place to withdraw, alone	But still be in touch with the group
One part dominated by children	Another part dominated by adults

Each member of the family in a different pursuit

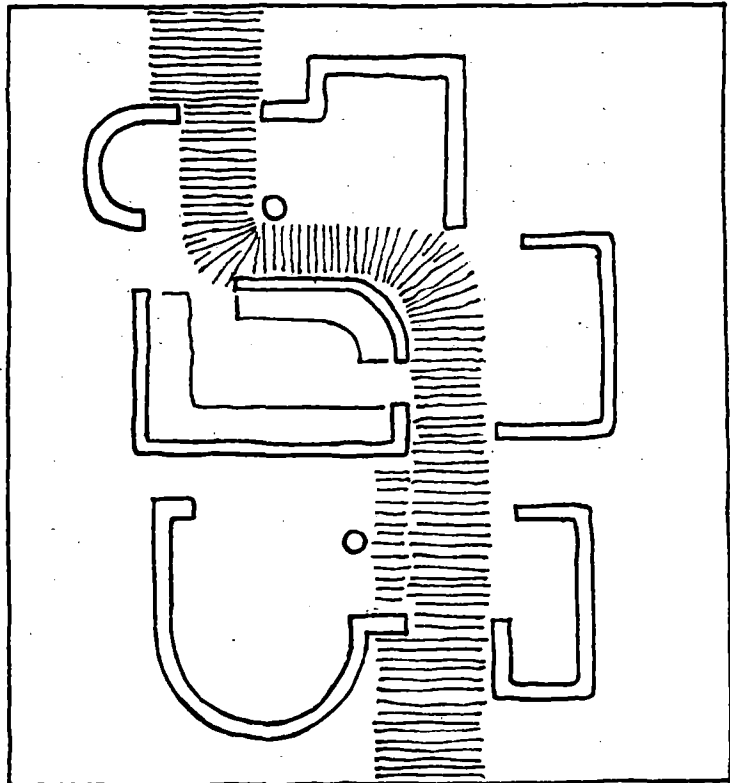
Inside & Outside  
Alone & Together  
One & Many

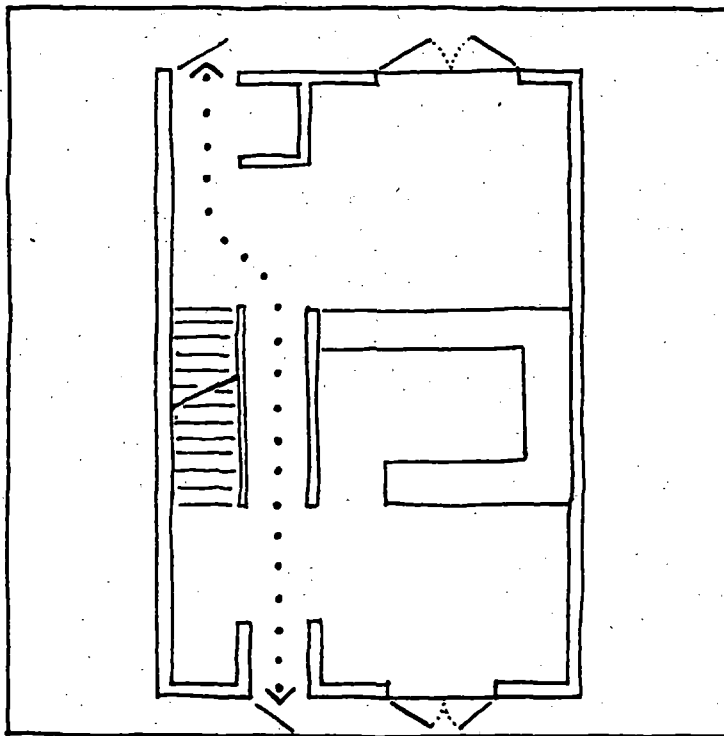
Rooms as 'nooks' off hall space

### GUIDELINES FOR PLANNING LIVING AREAS

#### HALLWAYS AS 'IN-BETWEEN' PLACES

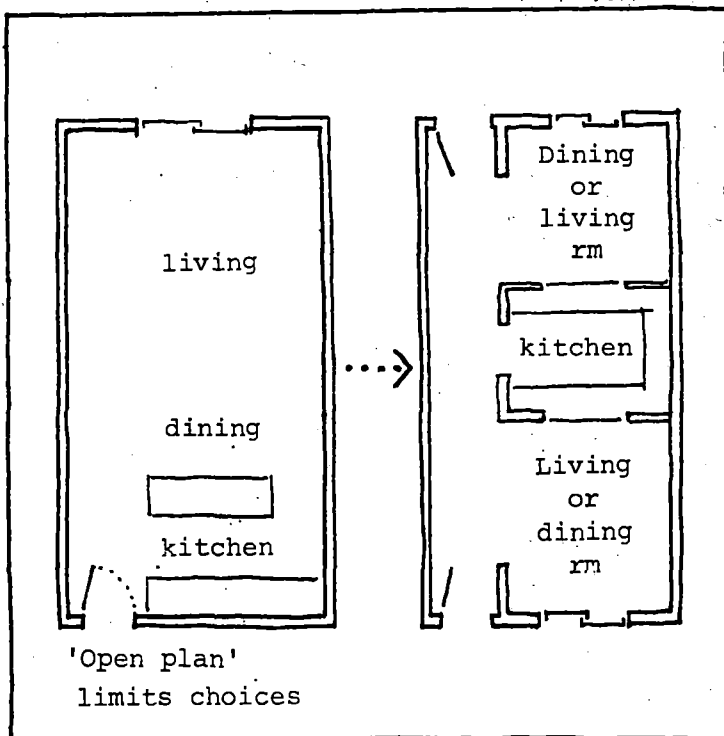
- The hallways of the dwelling can be made as "in-between" spaces, so that rooms may be conceived as a set of "nooks" opening off the hall space.
- The hall can be thought of as a "porch" to each room from which someone can observe the activity in a room without disrupting it. For the child, this is a place to pause before choosing, a place to watch before participating.





Hall as through route

Open vs. Divided plan



## CONNECTING FRONT AND BACK DOORS

- Make the hall into a through route between front and back entries. Create winter vestibules at front and back entries.

This will allow a child to move through the house without disrupting a room set up for a specific activity, (whether it is for children or adults). As well, muddy boots and drafts in bad weather are less of a nuisance if access is through a hall and vestibule and not through patio doors in a living room.

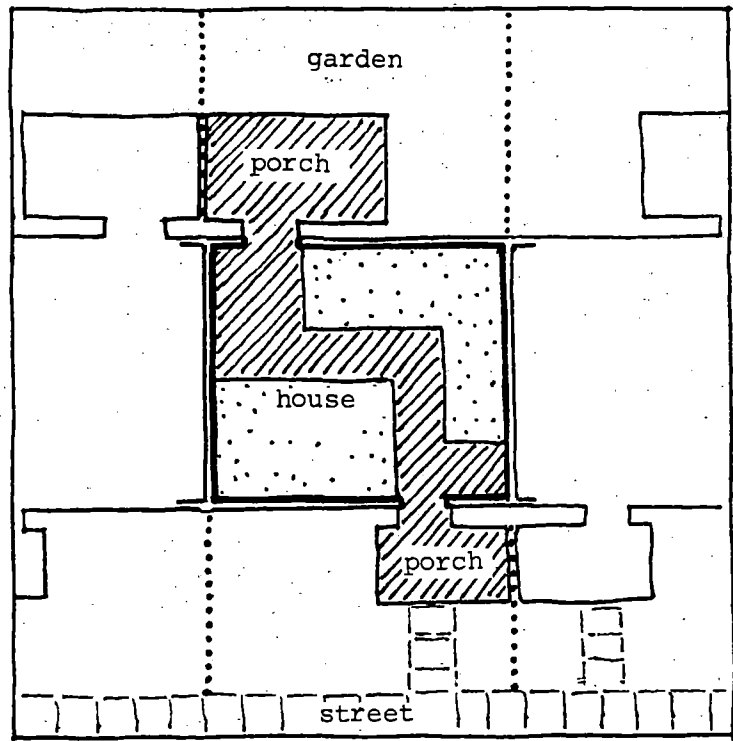
## DIVIDING LIVING AREAS

- The kitchen should be placed in the centre to divide living spaces. This separates the potential family-playroom from the living room, making clearer distinctions possible between activities in each room.

The family can also choose whether the front room or the back room should be designated as quiet or active, child oriented or adult oriented, etc. Such designations might change as the family grows up and the roles of the rooms change, but they might also change daily between daytime and evening use.

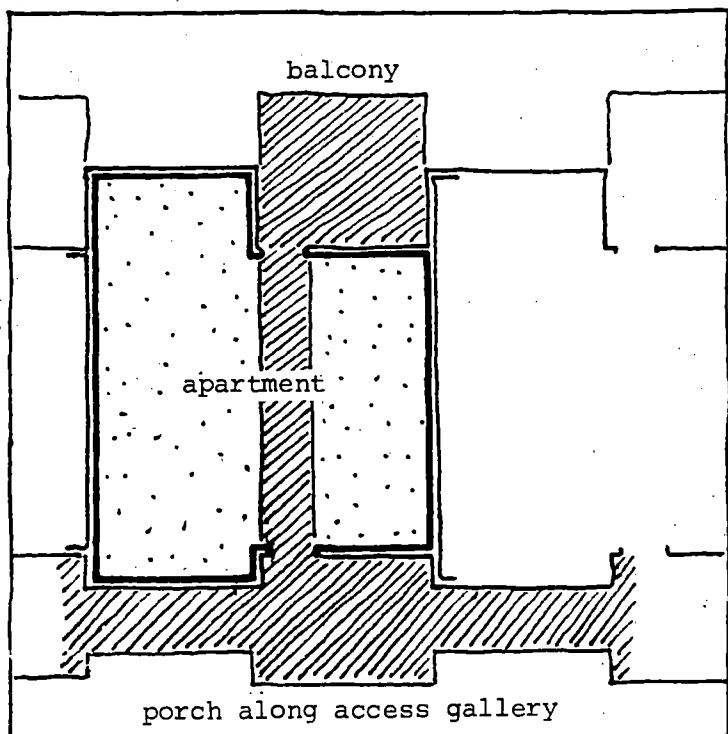
## SUBSTANTIAL PORCHES

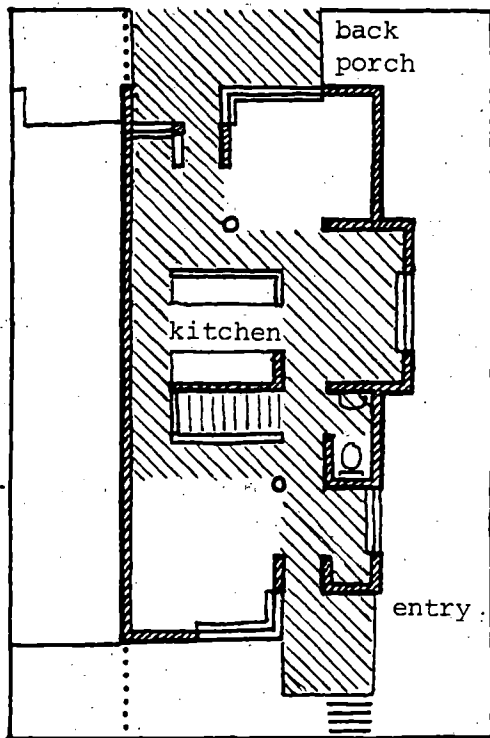
- Large covered porches should be created as "stepping stones" to the outdoors, easing the connection to outside play in all seasons.
- Front porches are an important way for the child to choose between independence and security. They are in-between places partly inside, under the roof shelter of the home, and partly outside exposed to street life and friends. An equivalent front porch space should be created for apartment dwellings as well. (See discussion on types of outdoor play in Chapter 5).
- Back porches or covered decks or balconies (in apartments) are potentially additional "outdoor rooms", providing additional active play space for both children and adults. This is essential in a small house or apartment where the extra sheltered space is needed for active play.



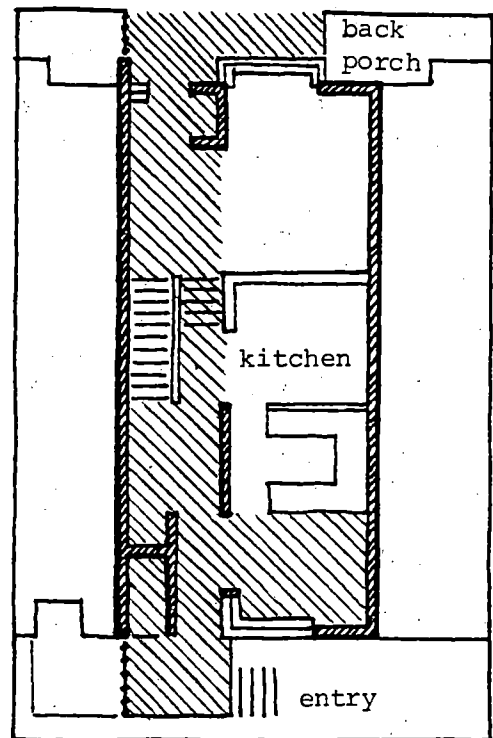
house porches

apartment porches



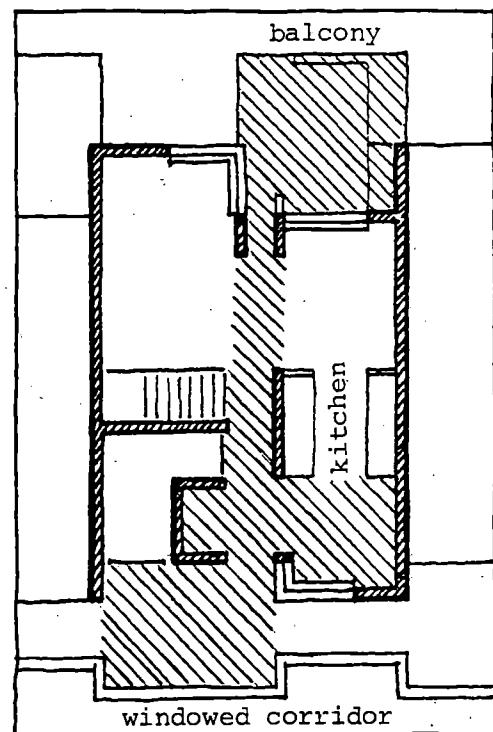


Semi-detached dwelling



Row-House dwelling

Apartment dwelling



These three plans are intended to illustrate the application of the guidelines to typical dwelling units. Only the lower level of two storey units is shown in each illustration.

The shaded areas are the "in-between" areas of the dwelling including halls, porches, and other less defined spaces.

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## APPENDICES



## APPENDIX A: THE HOME SURVEY

### OBJECTIVE

Previous research by the Social Planning Council has indicated that the majority of private, unsupervised child care situations provide custodial type care lacking in opportunities for stimulating, educational activity. Part of the problem in such care was attributed to the physical environment of the home: residential dwellings are not designed to meet the developmental needs of young children. Caregivers' houses and apartments did not support a wide variety of children's activities. Such activities as active play, messy projects, and noisy games were discouraged. In their place, such passive activities as television viewing were encouraged. (Johnson, 1978).

In Canada, the great majority of preschool age children spend most of their time in a home setting. Whether it is their own home, or the home of a family day care provider, such a home environment needs to offer opportunities for a wide range of activities. The present survey was designed to investigate ways in which a home environment can be designed or adapted to accommodate the needs of young children.

### METHOD

#### SAMPLE

The survey utilized a sample of some 25 homes with preschool aged children. The sample included both family day care homes and homes of parents of young children. The majority of the day care homes were agency supervised family day care homes. The sample was designed to include homes reputed to be outstanding in their use of indoor and outdoor space for children.

Homes were recruited from several sources. Family day care agencies were contacted and were requested to supply names of caregivers who provide

excellent children's environments in their homes. Parents' homes were recruited through a number of social agencies and community programs serving parents and young children. Such recruitment took the form of notices posted on bulletin boards, mailed flyers, and talks given by members of the project research team. An additional recruitment technique was the publication of notices in several newsletters. Such notices described the purposes and requirements of the survey, and requested parents and caregivers with suitable homes to contact the researchers.

## THE INTERVIEW

Each sample home was visited by an interviewing team. An environmental inventory, developed for this project, reviewed a set of children's activities, and listed the features in the physical environment which supported such activity. In addition, the inventory noted the frequency with which children engaged in each activity. The inventory also included a series of attitudinal questions relating to parents' and caregivers' feelings about children's use of the home. Special changes renovations to improve the home environment for children were also noted. Floor plans were prepared for all parts of the home used by children. Potographs and sketches were used to record children's play patterns in the home setting, as well as to document features of special interest in the home.

## CHARACTERISTICS OF THE SAMPLE

The survey included a total of twenty-five homes. Half of the respondents were in-home family day care providers, and many of these had preschool age children of their own.. The other half were parents of preschool children who did not provide child care for others. The majority of respondents (15) resided in single detached dwellings. There were 5 who lived in semi-detached dwellings, and another 4 in row or townhouse housing. The remaining respondent lived in a low rise apartment unit. Table 1 presents a distribution of respondents' dwelling types.

TABLE 1  
DISTRIBUTION OF RESPONDENTS DWELLING TYPE  
(n=25)

<u>TYPE OF DWELLING</u>	<u>NUMBER</u>
Single detached house	15
Semi-detached house	5
Row house or townhouse	4
Apartment in low rise building (1-5 storeys)	<u>1</u>
	25

## FINDINGS

### INDOOR ACTIVITIES

The questionnaire listed a set of indoor activities, and, for each one inquired about the frequency with which children engaged in the activity, and the location in the home.

Table 2 summarizes the data on frequency of various indoor activities; Table 3 presents a distribution of locations for the various activities. Table 4 graphically presents the total units of activity in Table 3 -- a summary measure of the total number of times particular rooms were used for children's play activities. Examination of Table 4 reveals that play-rooms serve as the major location for children's play, followed closely by kitchen areas. These data also indicate that few respondents realize the potential of dining rooms and halls as locations for children's play.

### OUTDOOR ACTIVITIES

The questionnaire also presented a list of outdoor activities for children. Table 5 summarizes the data on frequency of occurrence of various outdoor activities; Table 6 describes the location of such play activities.

TABLE 2

INDOOR PLAY ACTIVITIES: DISTRIBUTION OF FREQUENCY OF OCCURRENCE  
IN 25 HOMES

## FREQUENCY OF OCCURRENCE

ACTIVITY	DAILY	WEEKLY	LESS THAN ONCE A WEEK	NO RESPONSE/ MISSING DATA	TOTAL
Books	24			1	25
Television	20	1		4	25
Structured Games & Puzzles	17	4		4	25
Music	14	7		4	25
Water	13	5	4	3	25
Construction	12	7	1		25
Push/Pull Wheeled Toys	12	2	1	10	25
Arts & Crafts	11	13		1	25
Dramatic	11	2	2	6	21
Gross Motor	6	1	2	16	25
Cooking	4	9	3	9	25
Private	3	2	4	9	18
Sand	1	did not occur			

TABLE 3

## INDOOR PLAY ACTIVITIES: DISTRIBUTION OF LOCATIONS\* IN 25 HOMES

ACTIVITY	LOCATION										TOTAL
	PLAY ROOM	KITCHEN	BED-ROOM	OTHER**	LIVING ROOM	FAMILY ROOM	NO RESTRIC-TION	DINING ROOM	BATH-ROOM	HALL	
Structured Games & Puzzles	10	13	11	3	3	2				1	43
Television	2	2	4	3	5	9		1			26
Arts & Crafts	5	16	3	1	0	2		5	1		33
Push/Pull Riding Toys	6		1	5			5				17
Gross Motor	6			3	3		3			4	19
Construction	9	2	2	9	4	3		3			32
Music	7	2	6	6	19	3		1			44
Cooking	1	18						1			20
Dramatic	6	3	4	4			1				18
Private	7	2	11	2				1		1	24
Sand	not recorded										6
Water				3					6		9
Books	8	1	10	4		3	3				29
Total units of activity	67	59	52	43	34	22	12	12	7	6	

\*Note- Respondents were permitted to indicate more than one activity location.

AS \*\*Other includes: crawl spaces, basements, storage rooms, laundry rooms.

TABLE 4  
USAGE OF ROOMS

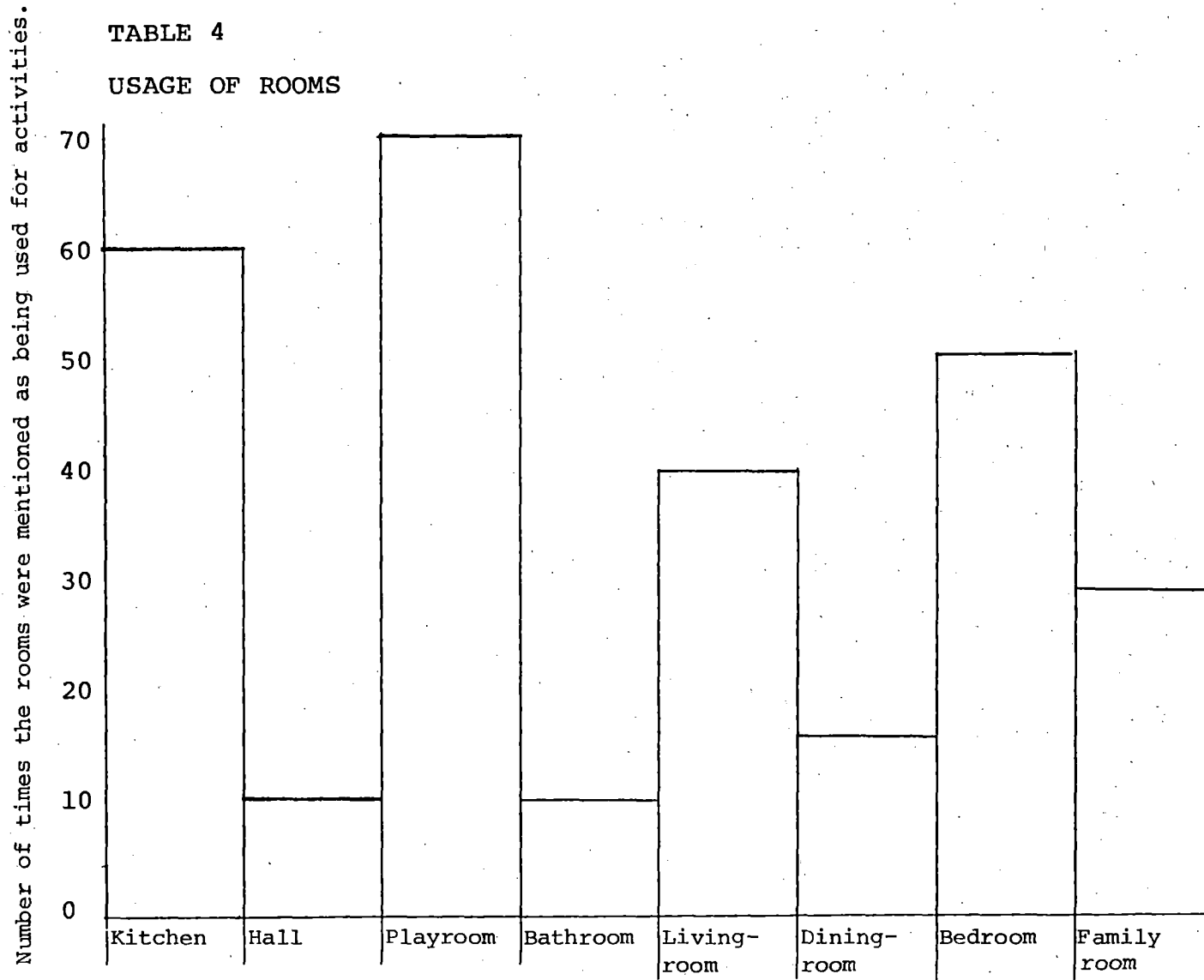


TABLE 5

OUTDOOR PLAY ACTIVITIES: FREQUENCY OF OCCURRENCE IN 25 HOMES

## FREQUENCY OF OCCURRENCE

ACTIVITY	SUMMER		WINTER		NO COMMENT
	DAILY	WEEKLY	DAILY	WEEKLY	
Water	15	2			4
Snow			13	3	4
Arts & Crafts	12	1			
Riding Vehicles					
Push/Pull Toys	8	4		2	2
Gross Motor	5	1		2	4
Construction	4	2			1
Sand	4	1		1	7

TABLE 6

## OUTDOOR PLAY ACTIVITIES: DISTRIBUTION OF LOCATIONS IN 25 HOMES

ACTIVITIES	LOCATION							
	FRONT YARD	BACK YARD	SIDE- WALKS DRIVE- WAYS	PORCH	PATIO	PARK	OTHER*	NONE
Water		20	1			4	1	1
Gross Motor	1	18				4	2	
Arts & Crafts		15	1	1		1	0	5
Snow	6	15	1			7	0	
Gardening		14				1	0	8
Sand		14	1			5	0	6
Construction		10		2		1	0	10
Riding Vehicles Push/Pull Toys		8	6	1	2	2	6	
Total	7	114	10	4	2	25	9	30

\*Others include - sheds, behind apartment, pool, farm.



## ATTITUDES AND ADAPTATIONS

Respondents were asked a series of questions designed to reveal their views on the use of interior and exterior home space by young children. All respondents were asked whether there were times when the children played all alone, without the respondent's participation. A majority of them answered "yes", most of these stated that they supervised children's independent play. Only one respondent said 'no' there were no such times. All of those who replied "yes" were then asked to describe the location of such independent play. These responses indicate that the backyard and playroom were the most frequent location. Table 7 presents a distribution of response to the question on location of independent play.

Nearly all respondents reported that they engaged in play with children. Most common among the shared activities were arts and crafts, cooking, reading and games. Table 8 presents a distribution of responses on location of joint adult-child activities.

Respondents were asked to indicate any changes they had made, and/or were planning to make to their homes to better accommodate the needs of children. Eighty percent of the respondents had made some interior modifications, some requiring major construction such as playrooms, lofts, bunks, as well as other, more minor changes such as lowering shelves and providing hooks for children's clothes. Half of the sample described changes they were hoping or planning to make in their homes.

The survey response also indicated that 23 respondents had made -- and 10 anticipated making -- changes in the outdoor environment of the home.

Yards had been fenced, sandboxes, pools, climbers and other specific play equipment added by 18 of the respondents and planned by 10 of the families.

A majority of homes (n=21) indicated that children regularly use household

furnishings and household equipment in their play. The use of tables for arts and crafts, beds, couches, pillows was mentioned most frequently. Child scaled furniture, was evident in 23 survey homes. Most common were child-sized chairs and tables.

TABLE 7

LOCATION OF CHILDREN'S INDEPENDENT PLAY ACTIVITIES  
FREQUENCY OF INDEPENDENT PLAY ACTIVITIES

	NUMBER OF MENTIONS*
Playroom	8
Backyard	7
Everywhere	5
Kitchen	3
Basement	2
Bedroom	2
Park	2
Crawlspce	1
Living Room	1

\*Note: Respondents were able to make more than one response

TABLE 8

LOCATION OF SHARED PLAY ACTIVITY INVOLVING CHILDREN AND  
ADULTS  
FREQUENCY OF SHARED PLAY ACTIVITIES

	NUMBER OF MENTIONS*
Kitchen	10
Living Room	6
Dining Room	4
Playroom	4
Family Room	2
Bedroom	1

ENVIRONMENTAL ANALYSIS OF  
CHILDREN'S PLAY OPPORTUNITIES

APPENDIX B:

THE CHILDREN'S ENVIRONMENTAL INVENTORY

Name of Respondent: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone No.: \_\_\_\_\_ Date: \_\_\_\_\_  
Interviewer: \_\_\_\_\_

**I. BACKGROUND**

1. List children in the family by age and sex.


2. Does respondent provide day care on a regular basis for any children who are not her own? yes ☐ no ☐

2A. If day care is provided, list children in care by age and sex.


**II. PHYSICAL SPACE**

1. Type of Home

1. single detached house ☐  
2. semi-detached house ☐  
3. row house, town house ☐  
4. apartment or flat in house ☐  
5. apartment in low-rise building (1 - 5 storeys) ☐  
6. apartment in high rise building (more than 5 storeys) ☐

2. Size of home

--	--	--	--	--	--

square feet

3. Size of back yard

--	--	--	--	--	--

square feet

4. size of front yard

--	--	--	--	--	--

square feet

5. Size of other private outdoor space with direct access **INDICATE WHICH**

balcony ☐ patio ☐ deck ☐ porch ☐ other (specify) ☐

square feet

III. OPPORTUNITIES FOR PLAY

1. Children's indoor activities

Following is a list of activities. For each activity describe:

A) location in which the activity is performed by children  
B) equipment used by children for the activity  
C) accessibility of equipment to children (high, medium, low)  
D) amount of time children spend in the activity (e.g. daily, several times a week, weekly, seasonally)

ACTIVITY	LOCATION	Equipment		FREQUENCY	COMMENTS
		DESCRIBE EQUIPMENT	ACCESSIBILITY OF EQUIPMENT		
Eat					
Sleep					
Toilet/Washroom					

A.		B. Equipment		C.	D.
ACTIVITY	LOCATION	DESCRIBE EQUIPMENT	ACCESSIBILITY OF EQUIPMENT	FREQUENCY	COMMENTS
Dressing - outer-wear					
Structured games, puzzles					
Books, magazines					
Television viewing					
Messy play (sand, water, paint)					

A.		B. Equipment		C.	D.
ACTIVITY	LOCATION	DESCRIBE EQUIPMENT	ACCESSIBILITY OF EQUIPMENT	FREQUENCY	COMMENTS
Ride, push, or pull wheeled toys					
Play with/observe pets					
Gross Motor Activity (e.g. climbing, sliding, running)					
Fine motor activity (manipulative toys, equipment)					
Construction					

ACTIVITY	A. LOCATION	B. Equipment		C. ACCESSIBILITY OF EQUIPMENT	D. FREQUENCY	COMMENTS
		DESCRIBE EQUIPMENT				
Play with small wheeled toys						
Arts, crafts						
Music						
Cooking activities						
Dramatic play						
Individual "private" play						
Other (specify)						

## 2. Children's Outdoor Activities

Following is a list of activities that children may engage in outdoors. For each activity, describe:

- A) location in which the activity is performed
- B) equipment used by children for the activity
- C) accessibility of equipment to children (high, medium, low)
- D) amount of time children spend in the activity (e.g. daily, several times a week, weekly, seasonally)

ACTIVITY	A. LOCATION	B. Equipment		C. ACCESSIBILITY OF EQUIPMENT	D. FREQUENCY	COMMENTS
		DESCRIBE EQUIPMENT				
Ride, Push, Pull Large Wheeled Toys/Vehicles						
Gross motor activity						
Sand play						

A.		B. Equipment		C.		D.
ACTIVITY	LOCATION	DESCRIBE EQUIPMENT	ACCESSIBILITY OF EQUIPMENT	FREQUENCY	COMMENTS	
Water play						
Snow play						
Construction building						
Messy play						
Play with small wheeled toys						

A.		B. Equipment		C.		D.
ACTIVITY	LOCATION	DESCRIBE EQUIPMENT	ACCESSIBILITY OF EQUIPMENT	FREQUENCY	COMMENTS	
Gardening						
Eating						
Sleeping						
Other (specify)						

3. What are the boundaries for children's outdoor play?  
PROBE FOR HOW SUPERVISED

\_\_\_\_\_

4. Does the home contain any child-sized furniture? ☐ Yes ☐ No  
Describe: \_\_\_\_\_

\_\_\_\_\_

5. Do the children use regular household furnishings and equipment in their play activities? ☐ Yes ☐ No  
Describe: \_\_\_\_\_

\_\_\_\_\_

6. Have you made any special changes for children in the interior of the home? ☐ Yes ☐ No  
Describe: \_\_\_\_\_

\_\_\_\_\_

7. Are there changes you plan to make for children in the interior of the home? ☐ Yes ☐ No  
Describe: \_\_\_\_\_

\_\_\_\_\_

8. Have you made any special changes for children outdoors? ☐ Yes ☐ No  
Describe: \_\_\_\_\_

\_\_\_\_\_

9. Are there changes planned for children outdoors? ☐ Yes ☐ No  
Describe: \_\_\_\_\_

\_\_\_\_\_

- 9A. Do other children from the neighbourhood come to play here?  
☐ Yes ☐ No  
How often would you say they come? \_\_\_\_\_

\_\_\_\_\_

- 9B. IF CHILDREN COME TO PLAY  
Where do they tend to play when they come?

\_\_\_\_\_

\_\_\_\_\_

#### IV. ATTITUDES

1. Are there times when the children play alone, without your participation? ☐ Yes ☐ No PROBE FOR SUPERVISION  
Describe activity and location: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Are there times when you participate in play activities with the children? ☐ Yes ☐ No  
Describe activity and location: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Are there parts of the home/things in the home which are "off limits" to children, where children may not go? ☐ Yes ☐ No  
Describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Are there parts of the home where children are encouraged to go? ☐ Yes ☐ No  
Describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



#### V. FLOOR PLAN

Draw floor plans for each floor of the home, and for front and/or back yard space. Each interior floor plan should include the following:

- windows
- radiators
- lighting
- flooring
- wall covering
- furniture - unique positive or negative
- television

For indoor and outdoor plans, shade in areas which are used by the children.

#### VI. ADDITIONAL VISITS

Part of our report on this project will include drawings or photographs of some of the play spaces in homes we have visited. If we should require such drawings of selected parts of your home, would you permit us to return to do them?

THANK YOU

## APPENDIX C:

### PROJECTS SUPPORTED BY CMHC AS PART OF THE RESEARCH AND DEVELOPMENT PROGRAM UNDERTAKEN BY THE CHILDREN'S ENVIRONMENTS ADVISORY SERVICE (CEAS) FOR THE INTERNATIONAL YEAR OF THE CHILD

The research reports from the following projects are available through the CEAS Resource Service from CMHC National Office and CMHC Regional Offices.

#### 1. INTERNATIONAL INVENTORY AND COMPARATIVE STUDY OF LEGISLATION OF PLAY SPACES

This will provide a basis for comparison of CMHC standards and policies with those of other countries, regarding the allocation of space for children in the residential environment and is seen as a resource for municipalities establishing such standards.

Aussi disponible en français.

#### 2. HOUSING CANADA'S CHILDREN - A DATA BASE

The compiled statistics will provide a profile of Canadian children and their housing.

#### 3. MAINTENANCE AND RETROFITTING COSTS OF CHILD-RELATED FACILITIES IN THE REAL ESTATE PORTFOLIO

Life cycle costing of child-related facilities and maintenance costs due to lack of child-related facilities will be used to determine cost effective solutions.

#### 4. EVALUATION OF EXTERIOR FACILITIES FOR CHILDREN IN THREE LOW INCOME PROJECTS

The report will provide an evaluation of three approaches to play space design in terms of play experiences, use by different age groups, accessibility, and resident satisfaction, using a technique that allows children to respond naturally.

#### 5. CHILD'S PERCEPTION OF THE NEIGHBOURHOOD

The study will document how children use selected urban neighbourhoods that vary in character and the influence of the design of the neighbourhood on the children's activities.

#### 6. HOUSING NEEDS OF URBAN NATIVE FAMILIES - A COMPARATIVE STUDY OF CHILDREN'S AND PARENTS PERCEPTIONS

A study of the needs of native children and their parents in the area of housing, neighbourhood and community, on the basis of which housing strategies can be developed to respond to their needs in the urban setting.

#### 7. WORKSHOP: "HOUSING THE FAMILY IN 2001", FOURTH CANADIAN CONFERENCE ON CHILDREN

The report deals with the changing family structure, the needs of children and the suitability of present forms of neighbourhood design to house the future family.

8. LOST AND FOUND: RECYCLING SPACE FOR CHILDREN

The study deals with the identification of waste or unused spaces in residential projects and design suggestions to recycle them into play spaces for children.

9. OUT OF THE CELLAR AND INTO THE PARLOUR - GUIDELINES FOR THE ADAPTATION OF RESIDENTIAL SPACE FOR THE CARE OF PRE-SCHOOL CHILDREN

The study will utilize existing knowledge of indoor and outdoor environmental requirements of children in order to accommodate the developmental needs of pre-schoolers in conventional family living space.

10. PRAIRIE WINTER PLAY PATTERNS

The project goal is to provide for children's play during the winter months, and will be conducted in two parts: (a) A study of social and environmental factors influencing children's activities in winter, and (b) A study of climatic, topographical and environmental factors that must be considered in the design of winter play facilities that accommodate physical, social, creative and intellectual play.

11. DESIGN CRITERIA FOR THE DEVELOPMENT OF A SHELTERED PLAY SPACE IN MEDIUM TO HIGH DENSITY FAMILY HOUSING PROJECTS IN THE ATLANTIC REGION

The report will examine the need for sheltered play facilities in high density family housing projects and recommend design details such as location, size, space allocation, construction materials, and play facilities.

12. PROJET PARAPLUIE - A USER GENERATED SHELTER DESIGN FOR THE RECREATION OF SCHOOL-AGE CHILDREN IN A MONTREAL PROJECT

The report will document a procedure that was used to involve school age children and their parents in the design, implementation, maintenance, and management of a sheltered play space, as a possible model for other residential developments.

Aussi disponible en français

13. GUIDELINES FOR THE SELECTION OF CONSTRUCTION MATERIALS, CONSTRUCTION METHODS, LANDSCAPE MATERIALS AND VEGETATION USED IN PLAY SPACES

An inventory of materials, finishes and methods with a description of qualitative characteristics and possible use in a play space in terms of user groups, climatic conditions, availability and maintenance will be produced.

14. PLAY SPACES TO ACCOMMODATE DISABLED CHILDREN

Design suggestions will be developed for an integrated play space that accommodates both disabled and normal children.

15. CHILDREN'S PLAY SPACES ON ROOF DECKS

The study will result in design suggestions that deal with the technical aspects, such as drainage, containment, and control of the microclimate, as well as the provision of stimulating play opportunities for child users.

16. LA SECURITÉ DES ENFANTS VS LA CIRCULATION - AUTO

The study will analyze accident statistics and traffic patterns in selected multiple housing projects and develop design suggestions in terms of traffic separation, lighting, landscaping, barriers, etc., to minimize the conflict between automobiles and children.

17. A CASE STUDY OF A COMMUNITY PARTICIPATION PROCESS FOR IMPROVING A NEIGHBOURHOOD TO BE MORE SUPPORTIVE OF CHILDREN AND YOUTH.

The case study will identify the process of community participation, the mechanisms available, the problems faced, and the resources tapped, and will serve as a model for other communities.

18. ADAPTATION OF CMHC DESIGN GUIDELINE ADVISORY DOCUMENT "PLAY OPPORTUNITIES FOR SCHOOL AGE CHILDREN, 6-14 YEARS", TO MUNICIPAL LEGISLATION

An example or model policy guideline on planning for play for school age children that is applicable to the municipal residential development control approval process and is written in such a way as to be easily adopted by municipalities.

19. MANAGING URBAN SPACE IN THE INTEREST OF CHILDREN

The proceedings of the International Symposium, dealt with the allocation of urban space to respect children's interests and the political, legal and socio-economic conditions required for various forms of organizations to function adequately. The report has been published by "Man and his Biosphere", the organizers of the symposium. Requests received will be forwarded to "Man and his Biosphere".

20. INCENTIVES AS AN AID FOR IMPROVING THE QUALITY OF THE FAMILY HOUSING ENVIRONMENT: A POSITION PAPER

The position paper will investigate alternatives which can serve as incentives to developers under the National Housing Act, to provide children's facilities within residential developments.

21. MONOGRAPH SERIES

Titles will be announced in the CEAS newsletter.