Children's Environments Series

Designing Child Care Settings

A Child-Centered Approach

Lorraine E. Maxwell

Cornell Cooperative Extension
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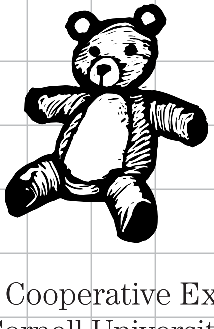

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Contents

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Introduction

This manual is intended to help child care providers in day care centers, Head Start centers, or nursery schools design the physical space of both indoor and outdoor settings for infants, toddlers, preschoolers, and younger school-age children. It can be used by individual providers or by a workshop leader training several providers. The materials will be useful to those planning a new child care setting or those who want to improve an existing environment. Many of the examples and exercises relate to child care centers, but they may also be relevant to family child care providers. All settings are assumed to be usable by children with a range of abilities and skills.

The manual is divided into four sections. The first section stresses the importance of the physical environment in all our lives and particularly in child care settings. The second section deals with planning and designing a classroom or playroom. The third section contains information on designing a new center, including working with an architect. The fourth section is on planning outdoor play settings as part of a child care program.

Each section contains exercises to illustrate the points described in the narrative and help you meet your specific needs. Some of the narrative material is provided separately as handouts that can be photocopied for distribution to a group. A list of other resources is included at the end of the manual.

If you are planning a child care setting for preschool children, use all exercises, tables, and other handouts. If you are planning a school-age child care program, use Exercises 1 through 9, Design Exercise A, and Tables 1, 2, 9, and 10. If you are planning a family day care program, use Exercises 1, 2, 3, 4, 5, 7, and 9, Design Exercises A and B, and Tables 1, 2, 9, and 10.

SECTION 1

Getting Started

This section is useful for

1. child care providers working with children from infancy through nine years of age.
2. day care centers, family day care providers, and school-age care providers.

In this section you will learn

1. the role of the physical environment in everyday activities.
2. the importance of recognizing children's developmental skills and level.

Exercises

1. Response to Different Environmental Settings
2. Environment-Behavior Fit
3. What a Child Can Do

The Physical Environment

Adults' Experiences

The environment consists of all external conditions that may affect an individual. The physical setting is one component of the environment that influences how we feel and what we do. A house of worship, for example, encourages reflection, adoration, meditation, and humility. The type and arrangement of seating, lighting, use of symbols, and acoustics support the activities that take place there. A department store's lighting, arrangement of displays, circulation paths, and location of sales staff should be organized to encourage browsing, examining, and especially buying.

Although we know that different activities require different physical settings, we often do not consider how much influence these settings have on our feelings and behavior. The person who walks through a department store talking and laughing with her friend while they both admire the items for sale may be very quiet and solemn in church. How does the physical setting define or in part determine behavior?

Culture also affects physical settings. For example, in Navajo culture doors must face east. How would a Navajo child experience a school where the doors did not face east? Physical settings also support or hinder us in our daily activities and sometimes have consequences for our psychological well-being. If meal preparation and dining are important parts of life for a family of six (two parents and four children), how would their feelings and behaviors be affected if they lived in a home with a small, utilitarian kitchen and dining area designed for childless adults?

Exercises 1 and 2 illustrate how physical settings affect our feelings and behavior.

Children's Experiences

The environment influences children long before they encounter a formal learning situation. The physical setting provides numerous learning opportunities and serves as a teacher as much as the people who are in the setting.

Children's experience of the environment, however, is different from that of adults. Children, especially young children, are rarely in control of their environments. Children's stature and physical abilities often determine how they experience a physical setting. A young child (infant, toddler, preschooler) primarily experiences a sensory environment. Everything is to be touched, tasted, smelled, listened to, and examined carefully. Depending on a specific child's abilities, one sense might be limited but others enhanced (e.g., a child may have limited vision but can experience the environment through the sense of touch and hearing). Spaces must tolerate movement and noise generated by the child. Adults notice order and cleanliness; children notice novel spaces to crawl into or materials to make something out of.

Children, like adults, are influenced in how they feel and behave by the total environment and the physical setting in particular. A large open area may be an invitation to run or it might evoke feelings of loneliness and fear. The physical setting can support and encourage a child's curiosity and sense of competence or it can make exploration and the development of self-esteem impossible for those who are not tall enough or strong enough or cannot see or walk or run.

Exercise 3 will help the group to think about the abilities of children of different ages. Remember to think about how a child with a physical disability might differ from a typically developing child of the same age as you complete the exercise.

EXERCISE 1

Response to Different Environmental Settings

Describe how you would feel if you were in each of the following settings.

Crowded elevator

Crowded stands at a football game

The room where you are currently

A room with a view of trees and open areas

A fluorescent-lit supermarket

Adapted from *The Learning Environment for Young Children* (Albany: New York State Department of Social Services, Agency for Child Development and Brooklyn College Day Care Project, 1979).

EXERCISE 2

Environment-Behavior Fit

Describe, from your perspective, how noise, furniture and arrangement of furniture, other people, and lighting affect the way you do the activities listed below.

Sleeping

Noise

Furniture and Arrangement

People

Lighting

Working at computer

Noise

Furniture and Arrangement

People

Lighting

Adapted from *The Learning Environment for Young Children* (Albany: New York State Department of Social Services, Agency for Child Development and Brooklyn College Day Care Project, 1979).

Reading

Noise

Furniture and Arrangement

People

Lighting

Talking with a friend

Noise

Furniture and Arrangement

People

Lighting

Eating a meal

Noise

Furniture and Arrangement

People

Lighting

EXERCISE 3

What a Child Can Do

List some things you think **infants** can do. Include items in each category.

Physically

Emotionally

Socially

Cognitively

Observe an infant for a period of time. Make any additions or corrections in the list of things you indicated a child of this age can do.

Physically

Emotionally

Socially

Cognitively

How would a disability in one area (e.g., hearing impairment) affect a child's ability or potential in another area (e.g., socially)? Think of at least two examples.

Adapted from *The Learning Environment for Young Children* (Albany: New York State Department of Social Services, Agency for Child Development and Brooklyn College Day Care Project, 1979).

EXERCISE 3

What a Child Can Do

List some things you think **toddlers** can do. Include items in each category.

Physically

Emotionally

Socially

Cognitively

Observe a toddler for a period of time. Make any additions or corrections in the list of things you indicated a child of this age can do.

Physically

Emotionally

Socially

Cognitively

How would a disability in one area (e.g., hearing impairment) affect a child's ability or potential in another area (e.g., socially)? Think of at least two examples.

Adapted from *The Learning Environment for Young Children* (Albany: New York State Department of Social Services, Agency for Child Development and Brooklyn College Day Care Project, 1979).

EXERCISE 3

What a Child Can Do

List some things you think **preschoolers** can do. Include items in each category.

Physically

Emotionally

Socially

Cognitively

Observe a preschool-aged child for a period of time. Make any additions or corrections in the list of things you indicated a child of this age can do.

Physically

Emotionally

Socially

Cognitively

How would a disability in one area (e.g., visual impairment) affect a child's ability or potential in another area (e.g., socially)? Think of at least two examples.

Adapted from *The Learning Environment for Young Children* (Albany: New York State Department of Social Services, Agency for Child Development and Brooklyn College Day Care Project, 1979).

EXERCISE 3

What a Child Can Do

List some things you think a **child five to nine years old** can do. Include items in each category.

Physically

Emotionally

Socially

Cognitively

Observe a child in this age range for a period of time. Make any additions or corrections in the list of things you indicated a child of this age can do.

Physically

Emotionally

Socially

Cognitively

How would a disability in one area (e.g., not able to walk) affect a child's ability or potential in another area (e.g., socially)? Think of at least two examples.

Adapted from *The Learning Environment for Young Children* (Albany: New York State Department of Social Services, Agency for Child Development and Brooklyn College Day Care Project, 1979).

SECTION 2

Designing the Classroom/ Playroom

This section is useful for

1. child care providers working with infants through children nine years of age.
2. day care centers, family day care providers, and school-age care providers.

In this section you will learn

1. how the physical environment influences children's experiences in child care.
2. how to design a classroom/ playroom.
3. how to include children with disabilities in the child care classroom/playroom.

Exercises

4. Goals
5. Matching Goals, Activities, and the Environment
6. Alternative Classroom Arrangements
7. Evaluation of the Use of Space
8. Classroom Evaluation
9. Opportunities

Handouts

Design Exercise A and B

Activity Area Checklist

Additional Classroom Issues

Table 1: Relationship between Goals, Activities, and the Physical Environment

Table 2: Issues to Be Considered When Planning Activity Centers and Classroom Arrangement

The Child Care Physical Environment

Effects on the Child

Research indicates that young children can and do thrive in child care settings outside of their own homes. Child care centers or family child care homes can be exciting places for young children where they are well cared for. The physical setting plays a major role in creating a place where children can thrive. Child care providers help to create that physical setting. Understanding more about the role of the physical environment in child care will help providers develop the best possible setting.

Researchers have found that in programs for preschool-aged children, crowding in the classroom, the size of a child care center, and the arrangement of the classroom/playroom, all parts of the physical environment that caregivers control, can have specific consequences for children. For example, too large a group, resulting in crowding, can have negative effects on young children. In groups of fifteen or fewer, children are more cooperative, more reflective and innovative in their play, and make more verbal initiatives. Teachers in these smaller classrooms are less managerial and more active and social with the children. Alternately, in higher-density situations children are less cooperative, have shorter attention spans, are more aggressive in their play, exhibit more anxiety, show less self-regulatory behavior, and engage in less imaginative play. These effects are intensified by length of time spent in day care. Children in half-day programs are less negatively affected by large group sizes than children in full-day programs (six to ten hours). Additionally, children who come from crowded homes are likely to be easily distracted, hyperactive, or anxious and are especially susceptible to the negative effects of crowding in day care. Teachers/providers in programs with large group sizes are often more concerned with structure or rules than interacting with the children.

The size of child care centers is associated with the amount of exploratory behavior children exhibit and the center's relative emphasis on rules and routines. In large centers (those with more than 100 children) there is usually more emphasis on rules and program structure than on children's need to explore. Large centers can work, however, if they are designed to function as several smaller units within one large structure. The design must allow children and adults to feel as if they are functioning in a small center. Separate entrances for groups of 50 to 75 children is one way to accomplish the small center feeling in a large center (more than 100 children).

Arrangement of classroom space is related to level of involvement with activities and children's self-directed activity. Child care classrooms/playrooms for three- to five-year-olds usually have a variety of activity areas that relate to developmental activities, for example, creative expression, dramatic/fantasy play, construction, prereading, and language skills. Classrooms that have well-defined activity areas encourage children to become more involved in developmentally appropriate activities and to explore more. Children spend more time involved in their activities and less time wandering when the activity areas are well-defined. They are also interrupted less often. Well-defined activity areas

- are sized for two to five children.
- have resources appropriate for the activity and in sufficient amount for the number of children.
- are partially surrounded by walls or low partitions.
- have bookcases, storage cabinets, or other furniture as partial dividers and can be moved and changed as the teachers or children wish to create different activity groupings.
- may have changes in the level of either the floor or ceiling (e.g., loft).
- have changes in floor coverings or textures (e.g., carpeting vs. tile floor).
- may have ceiling hangings or lighting that define a space.
- may have boundaries created by natural building elements (e.g., columns, corners).

Classrooms/playrooms also

- have soft, comfortable spaces where children can go for quiet and restoration.
- have opportunities for gross motor play in which all children can participate.
- have a variety of developmentally appropriate activities and materials.
- have furnishings and finishes (tables, chairs, high- or low-contrast surfaces) that meet the needs of children with various abilities.
- have equipment available to assist children with disabilities (e.g., corner chair, standing apparatus, walker, wheelchair).

It is also important to remember that the physical environment affects adults' as well as children's behavior. A classroom space that encourages cooperation, concentration, and purposeful exploration will allow the adult caregivers to spend more time with children in social activities and less time on managing the space, arbitrating disputes, and disciplining children.

Classrooms/playrooms for infants and toddlers must meet the developmental needs of this age group. Such spaces are not just scaled-down versions of preschool classrooms. Children of this age have a great need to explore the environment on their own terms. Some are sitting and reaching, some are crawling, others are walking. The physical environment should encourage safe exploration at all levels. Classrooms/playrooms for infants and toddlers

- have toys and materials within children's reach.
- are open and without barriers so that children can see play opportunities.
- provide opportunities to interact with other children.
- have a quiet, soft place for resting.
- have appropriate places for longer sleep periods.
- have developmentally appropriate places for climbing and using all gross motor skills.
- have comfortable places for adults to interact with children (i.e., adult-sized chairs for sitting and holding children).

In family day care homes where children of different ages are cared for there will most likely not be separate rooms for infants/ toddlers and preschoolers. One playroom must accommodate all children. Try to provide older children with a space where toddlers will not disturb their play. There should be a separate area for sleeping because infants and toddlers will sleep more than older children. Toddlers should also be able to practice new walking and crawling skills without being stepped on by older children.

Developmental Goals and Relationship to Classroom/Playroom Physical Environment

A child care setting should provide for children's physical, social, emotional, and intellectual development. The program must be able to accommodate children at their current level of development, provide challenges, and encourage the development of new skills. It should therefore have goals that relate to the physical, social, emotional, and intellectual development of all children.

To develop new skills, children must have the opportunity for a variety of experiences. Developmentally appropriate activities can provide many of these experiences. These activities take place in a physical setting, which can support or hinder the activities and therefore the goals of the program.

Developmental Goals

1. Physical development, including large and small motor skills
2. Intellectual development, including logical thought, symbolic thought, problem solving, concentration skills
3. Social-emotional development, including cooperation, empathy, impulse expression and control, trust
4. Creative expression, including problem solving, novel responses
5. Individuality, including self-control, sense of competency, sense of autonomy, self-esteem

Table 1 illustrates how goals, activities, and the physical environment are related. The activities listed in this table are typical for preschool-aged children. If your program serves older or younger children, substitute activities for that age group.

Using **Exercise 4**, list as many goals as possible for the children in your child care program. Keep in mind the kinds of things that children of different ages and abilities can do when developing the list of goals (refer back to **Exercise 3**). Once the goals have been identified, use **Exercise 5** to help you relate the activities to the physical setting. A physical setting includes the materials, equipment, furniture, and characteristics of the place (e.g., number of people, access to water, light level, need for quiet and privacy). List as many aspects of the physical setting as possible. Always keep in mind how the physical environment can enable differently abled children to participate in all aspects of the program. Refer to **Table 1** as an example of how to complete **Exercise 5**.

It is important to identify your goals and activities first, then think carefully about how the physical environment will support them.

Creating an Environment

A classroom/playroom setting in a child care program is more than just a collection of activity areas. Since a child may spend as much as ten hours a day in a child care classroom or family day care setting, there must be times and places for resting or sleeping, eating, personal grooming and toileting, moving, reflection, socializing, and doing activities. Although school-aged children spend only two to three hours a day in child care, these settings must also provide for individual and group activity as well as quiet and restoration. **Exercise 6** will help you see how different classroom arrangements in a preschool program may affect children's behavior. Each of the classrooms (Classrooms A, B, and C; see Figures 1, 2, and 3) gives a different message to children. Think about the message that you are giving when you design or arrange your classroom/playroom.

Design Exercises A and B are tools to use for planning classroom arrangements. In both exercises you will use the activities that you identified in **Exercise 5** and arrange these activities in a classroom setting. You may use both design exercises or choose only one. Use the one that you feel will be most helpful to you.

As you do these exercises, think about the issues listed in **Table 2**. Another tool that will help you set up the actual playroom/classroom is the **Activity Area Checklist**. If you already have a program, the checklist can help you evaluate your activity areas.

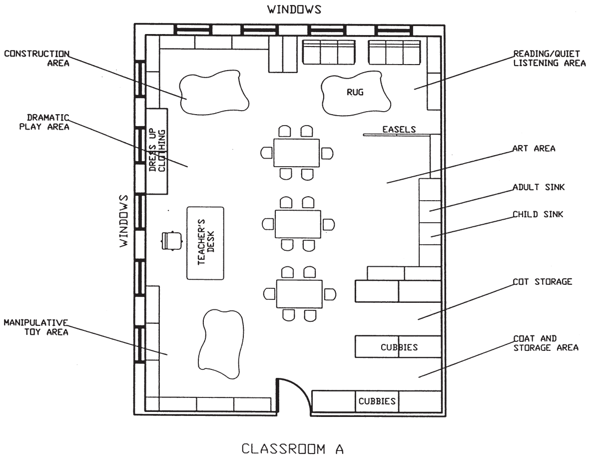


Figure 1.

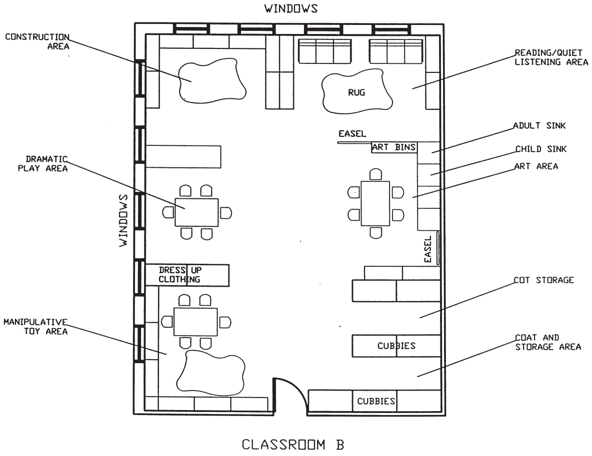


Figure 2.

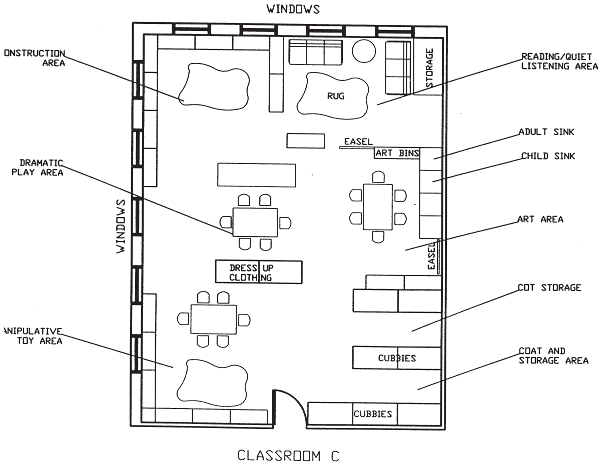


Figure 3.

Evaluating Your Child Care Setting

A child care setting should be designed with a clear set of goals and objectives in mind. The layout and arrangement of the space do not have to be, and should not be, permanent. There are features of a building that are fixed such as walls, ceilings, entryways, floors, columns, and the water source. To change these features could be costly and disruptive to the program. The arrangement of the activities in the room can be changed with little or no cost. When making decisions about furniture and equipment, child care providers should keep in mind the need to have a flexible space so they can respond to changing program needs (i.e., a decision to have mixed age groups in one room).

If the child care center is either in a new building designed specifically for that purpose or in a renovated space, the use of space should be evaluated after the children and staff have been in it for one to three months. Staff should be encouraged to set aside time to observe how children are using the classroom/playroom so they can identify strengths and weaknesses of the space. For example, are some activity areas rarely used while others are crowded? Are circulation paths clear? Do children have easy access to materials? Are children constantly interrupting each other? Staff should be encouraged to change the space based on their observations of how children use it.

Exercise 7 will help child care staff evaluate the classroom/playroom by observing children. **Exercises 8 and 9** also help staff evaluate the classroom/playroom setting and think of ways to improve the physical environment. Existing programs can also use these exercises to think about ways to improve the setting.

In addition to the room arrangement, other important aspects of the classroom setting are the lighting, displays, complexity, texture, and safety. See the handout “Additional Classroom Issues.”

Lighting

The classroom should be well lit and include natural lighting. At least some of the windows should be child height. It should be possible to control lighting, including natural light, to fit the needs of the activities. Reducing glare in the room will benefit all children but especially those who may have vision problems. Uniform lighting may sometimes be appropriate, but spot or task lighting may help children with sight impairments to participate in an activity.

Displays

Displays should enhance the setting but not compete with the toys and play materials. All levels of children’s work should be displayed. This will help to build self-esteem in children. Teachers’ work may also be displayed as well as a limited amount of purchased items. Displays should be visually accessible to children and changed frequently. Displays help to add color, interest, texture, and variety to a child care setting. Displays may appeal to more than the sense of sight (i.e., something to touch, smell). Walls should be painted a neutral color.

Complexity

The setting should be moderately complex. A variety of activities, materials, floor heights, ceiling heights, floor coverings, and shapes add to the complexity of a setting. Complexity adds interest to the setting and encourages children to explore. One of the very important ways children learn is through their own exploration. Some amount of novelty will enhance exploration. Too much complexity, however, may be overstimulating and confusing to children. Therefore, some aspects of the setting must also be predictable. Constant rearranging of large pieces of furniture in a room will be especially confusing to children with vision problems and may hinder their ability to function in the space.

Texture

A variety of textures adds interest to a setting. Texture can also be used as cues in the environment for sight- or hearing-impaired children. Variety in texture can be provided through carpeting, soft seating, hard seating, water, sand, and wood. No surface should be abrasive.

Safety

A child care setting must be safe and free from potential hazards. A setting should also provide challenges to children. These two characteristics must coexist. For example, a loft space with climbing components should be the appropriate height for the age group and have protective flooring underneath. There should be access to the loft space for children of differing abilities.

Animals in the Classroom

Children should be exposed to animals to teach them respect for all life. A bird feeder outside a window so that children can see different birds during the year might be preferable to a bird confined to a cage in the classroom. If animals are kept in the classroom, the animal and the children must be kept free from hazards. Children can, and should, help care for an animal but should not be allowed to harm the animal. Likewise, children's safety and well-being must also be guarded.

EXERCISE 4

Goals for an Infant/Toddler Program

List goals you want for your **infant/toddler** program. Be specific.

EXERCISE 4

Goals for a Preschool Program

List goals you want for your **preschool** program. Be specific.

EXERCISE 4

Goals for a School-Age Program

List goals you want for your **school-age** program. Be specific.

EXERCISE 5

Matching Goals, Activities, and the Environment

In the first column, identify goals for the children in your child care program. In the second, name some activities that will help them achieve these goals. In the third column, specify what environmental characteristics will support those activities. You may want to refer to Table 1 when completing this exercise. Make as many copies of this page as necessary.

This is for a classroom ____, a center ____, a playground ____

GOAL	ACTIVITIES	PHYSICAL ENVIRONMENT
Example: peer interaction	dramatic play	designated area with sufficient materials, variety of materials, and sized for 5 to 6 children

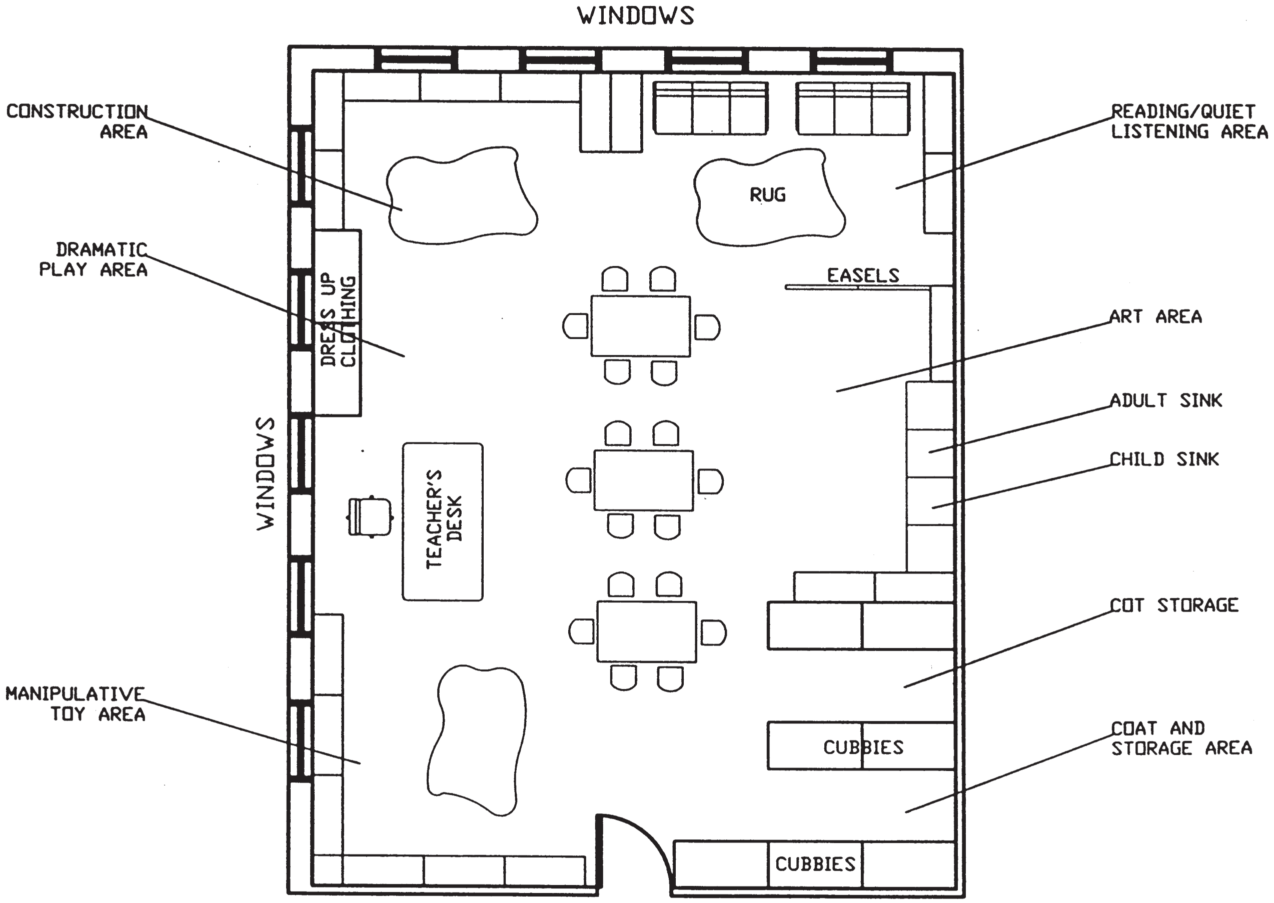
EXERCISE 6

Alternative Classroom Arrangements

For classrooms A (Figure 1), B (Figure 2), and C (Figure 3) describe how you think a child 3 to 5 years old would experience the space. Think about how the classroom would enhance or restrict any activities. If your program is for 5- to 9-year-olds, what are the implications for activities in each arrangement? What is missing? What is not needed?

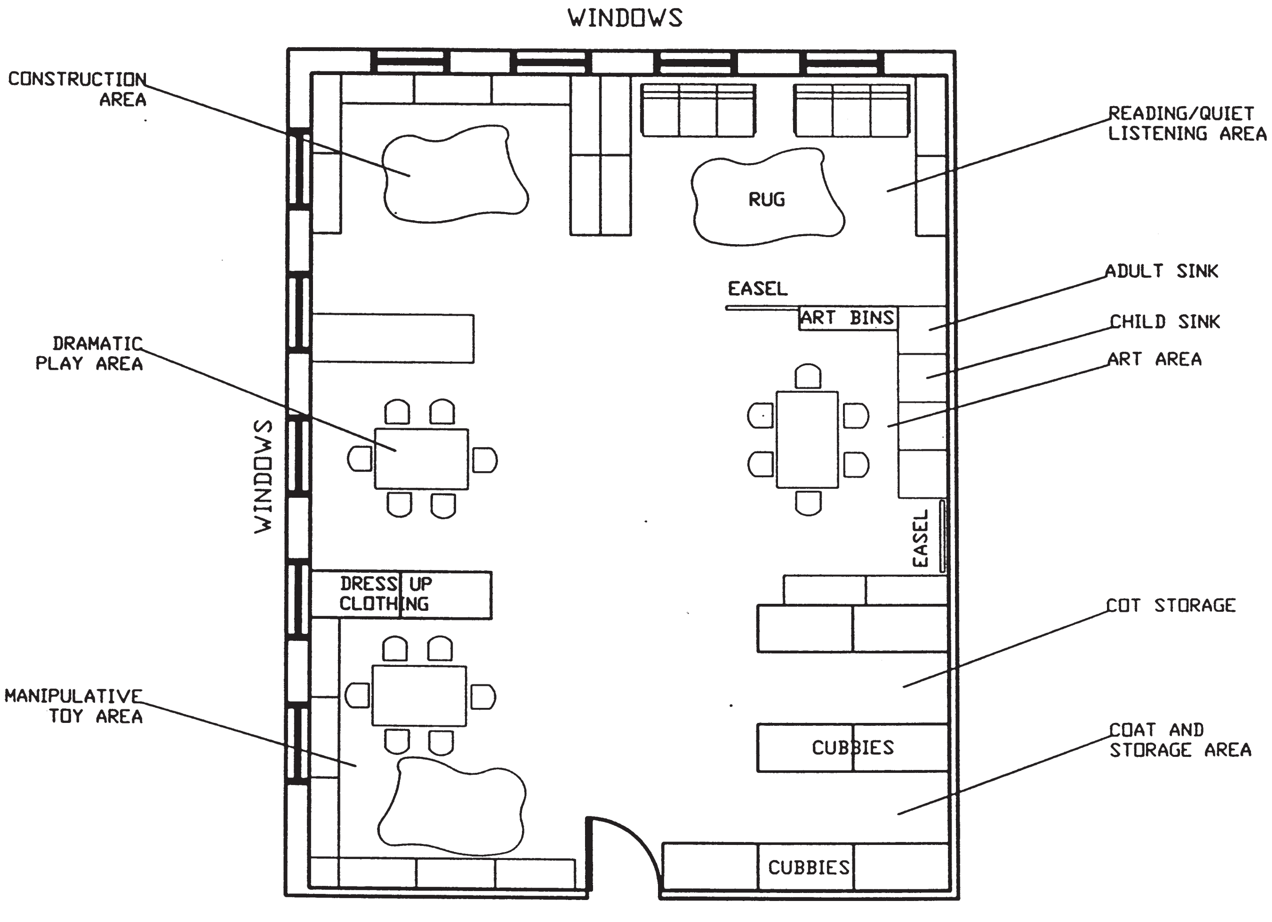
	CLASSROOM A	**CLASSROOM B**	**CLASSROOM C**
Physical activities			
Social activities			
Cognitive activities			

Figure 1.



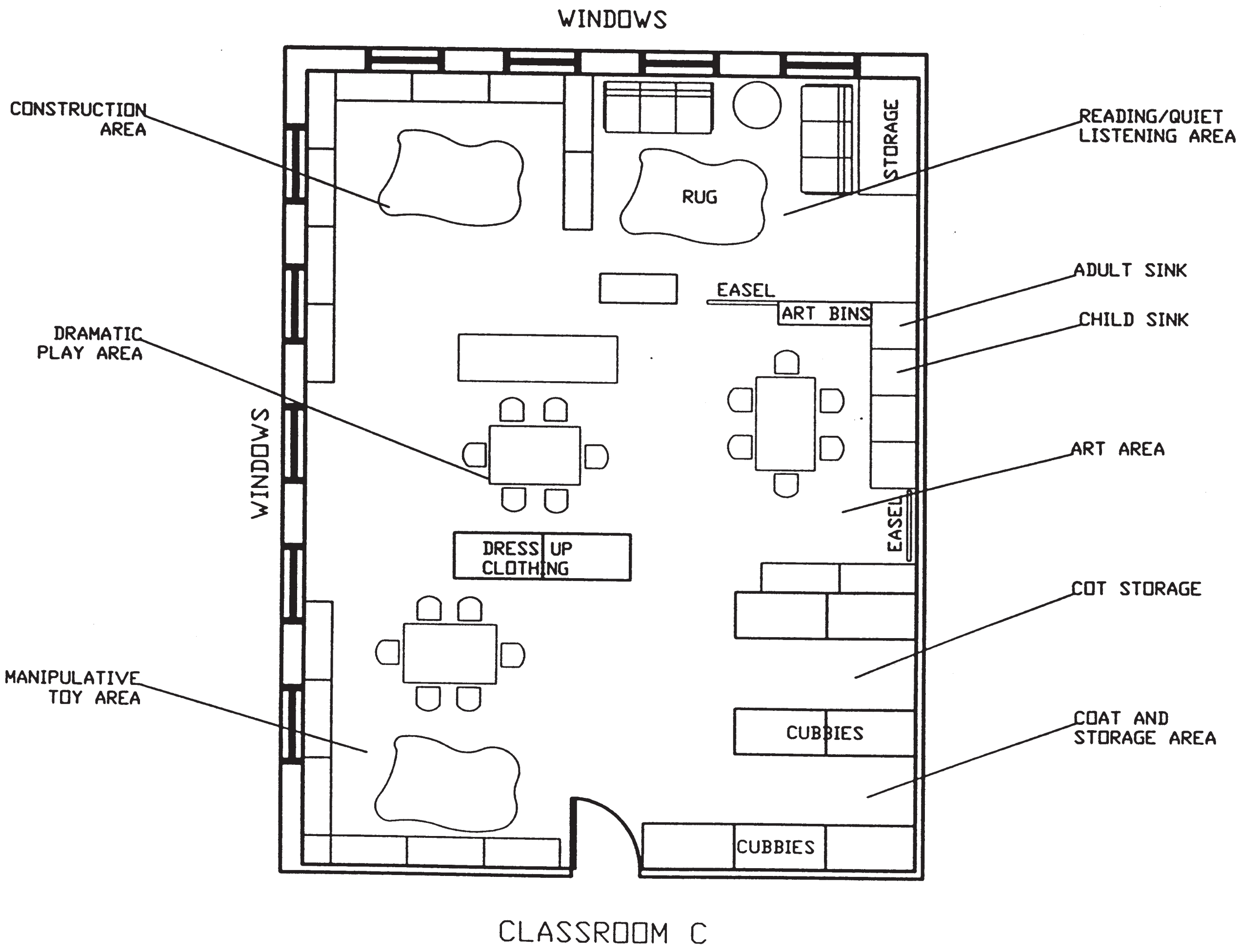
CLASSROOM A

Figure 2.



CLASSROOM B

Figure 3.


WINDOWS
CONSTRUCTION AREA
RUG
STORAGE
READING/QUIET LISTENING AREA
EASEL
ART BINS
ADULT SINK
CHILD SINK
DRAMATIC PLAY AREA
WINDOWS
ART AREA
EASEL
DRESS UP CLOTHING
COT STORAGE
MANIPULATIVE TOY AREA
CUBBIES
COAT AND STORAGE AREA
CUBBIES
CLASSROOM C

EXERCISE 7

Evaluation of the Use of Space

Once the children have been in the child care setting for a period of time, observe how they use the space. Pick a specific time when you can observe and let your colleagues attend to the children's needs. Observe for about 10 or 15 minutes. Observe several times during the course of a typical day so that you can see children doing different activities. Use this information to evaluate how well your choice of activities and the classroom/playroom layout are helping the program meet its goals. This evaluation can be used for classrooms in preschool and school-age child care programs.

Do children use some areas more than others? Which ones?

Are some areas never used? Which ones?

Does the play in each area complement, stimulate, or disturb activities in the adjoining area? Describe the play and how it relates to that in the adjoining area. If play is disturbed, how can you correct this situation?

Adapted from *The Learning Environment for Young Children* (Albany: New York State Department of Social Services, Agency for Child Development and Brooklyn College Day Care Project, 1979).

How does the room arrangement provide opportunity for children to do work that requires concentration without interruption? If some children are having trouble with this, how can the room arrangement be changed to help these children?

How many times during your observation period did a child ask a staff person to help get materials?

How many times during your observation period did a staff person have to get materials or put them away?

How much time during the observation period did a staff person spend setting up for or cleaning up after activities?

In what ways do children exhibit independent behavior?

How can children become more independent in their use of the space and the materials?

What materials get the most use?

What materials get the least use?

Can children distinguish circulation paths from the activity areas? How do children show in their behavior that they distinguish these areas?

Do children seek out spaces for quiet reflection, resting, or independent work? Where do they go for quiet play? When do they go there? What do they do in such places? Are they interrupted?

What size groups do children play or work in most often?

Does the size of the activity centers accommodate these work and play groups?

What do you feel is the biggest limitation or problem of the physical space?

How does the classroom/playroom work for children with disabilities?

What changes are required to make it work better?

EXERCISE 8

Classroom Evaluation

Classroom ________________________

Rate each classroom in your center or the playroom in your family day care program. Consider how the physical setting helps or hinders children in their daily activities. When rating the space consider how all children use it. Does the space meet some children's needs better than others?

Part A. The physical setting in my classroom/playroom helps children to

	LOW				**HIGH**
1. develop self-esteem and competency	1	2	3	4	5
2. have a sense of comfort and security	1	2	3	4	5
3. develop self-control	1	2	3	4	5
4. develop social behavior (cooperation, empathy)	1	2	3	4	5
5. engage in symbolic expression (pretend play, representational thought)	1	2	3	4	5
6. develop logical thought (understand relationship between things)	1	2	3	4	5
7. engage in creative expression (novel responses, problem-solving ability)	1	2	3	4	5
8. develop large and motor skills	1	2	3	4	5
9. develop concentration skills (length of task involvement)	1	2	3	4	5
10. appreciate differences in people (gender, ethnicity, physical differences)	1	2	3	4	5

Part B. For each of the characteristics that you rated a “3” or less, describe how you would change your physical setting to improve the rating. Think about the following issues: Do you need to change materials? The arrangement of materials? The location of activity areas? Ways to include children who have disabilities in your program?

EXERCISE 9

Opportunities

The physical setting of a child care environment includes the space, materials, furniture and equipment, and characteristics of the space (e.g., amount of noise, amount of light, number of people, accessibility). The child care environment is a place where children should feel happy, safe, and comfortable, and they should be able to learn new skills in all of the developmental goal areas that you identified in Exercise 4. The physical setting should provide opportunities for children to be successful. Use the following checklist to rate your new or existing classroom and generate any changes you think are necessary.

CLASSROOM ______________ PROVIDES (NAME OF CLASSROOM)	**YES**	**SOMEWHAT**	**NO**	**CHANGES NEEDED**
Opportunities for children to use their entire bodies in play				
Opportunities to develop large and fine muscle coordination				
Opportunities to handle and manipulate things in their environment				
A safe environment				
Opportunities to play alone as well as in groups				
Opportunities to try out a variety of roles that children see at home and in the community, not limited by race, cultural, or gender stereotypes				
Opportunities for sensory-motor experiences				
Opportunities to learn more about the things they see around them every day				
Opportunities to see their names or pictures and names and pictures of people they recognize				

CLASSROOM ______________ PROVIDES (NAME OF CLASSROOM)	**YES**	**SOMEWHAT**	**NO**	**CHANGES NEEDED**
Opportunities to see evidence of their own and others' culture	____	_________	_____	
Opportunities to have a variety of experiences that are interesting to them	____	_________	_____	
Opportunities to learn more about the "real" world and the people around them	____	_________	_____	
Opportunities to express their own ideas in a variety of ways	____	_________	_____	
Opportunities to sort, group, categorize, and classify the things around them, using unstructured and structured materials	____	_________	_____	
Opportunities to solve problems	____	_________	_____	
Opportunities to use a variety of materials that help develop the foundation of reading and math skills	____	_________	_____	
Opportunities for independent personal care	____	_________	_____	
Opportunities for appropriate expression of emotions	____	_________	_____	
Opportunities for support, cuddling, and nurturance	____	_________	_____	
Opportunity for each child to have a place of his or her own	____	_________	_____	
Opportunities to develop a positive self-concept	____	_________	_____	

Adapted from *The Learning Environment for Young Children* (Albany: New York State Department of Social Services, Agency for Child Development and Brooklyn College Day Care Project, 1979).

Design Exercise A

Classrooms

To help you think about how your classroom/playroom should look, you can develop what architects call a bubble diagram. Bubble diagrams illustrate relationships between spaces. Circles (and sometimes squares) are used to represent each activity space. Consult the goals and activities you identified in **Exercise 5** (see also **Table 1**) to choose the activities that will need space in your classroom. On a piece of paper, draw circles for each activity space. Circles representing activities that complement each other (e.g., block play and dramatic play) should be drawn touching each other. If separation is required between activities (e.g., quiet reading and block play), indicate this by placing the circles apart from each other. Spaces between circles may also represent circulation. When doing your bubble diagram, think about the various zones of the classroom—for quiet activities, noisy activities, messy activities. Include in your diagram entry, toileting, sleeping, cubby, and eating areas as well as a staff area. An example of a bubble diagram is included. This exercise can be used by those planning programs for infants through school age.

Centers

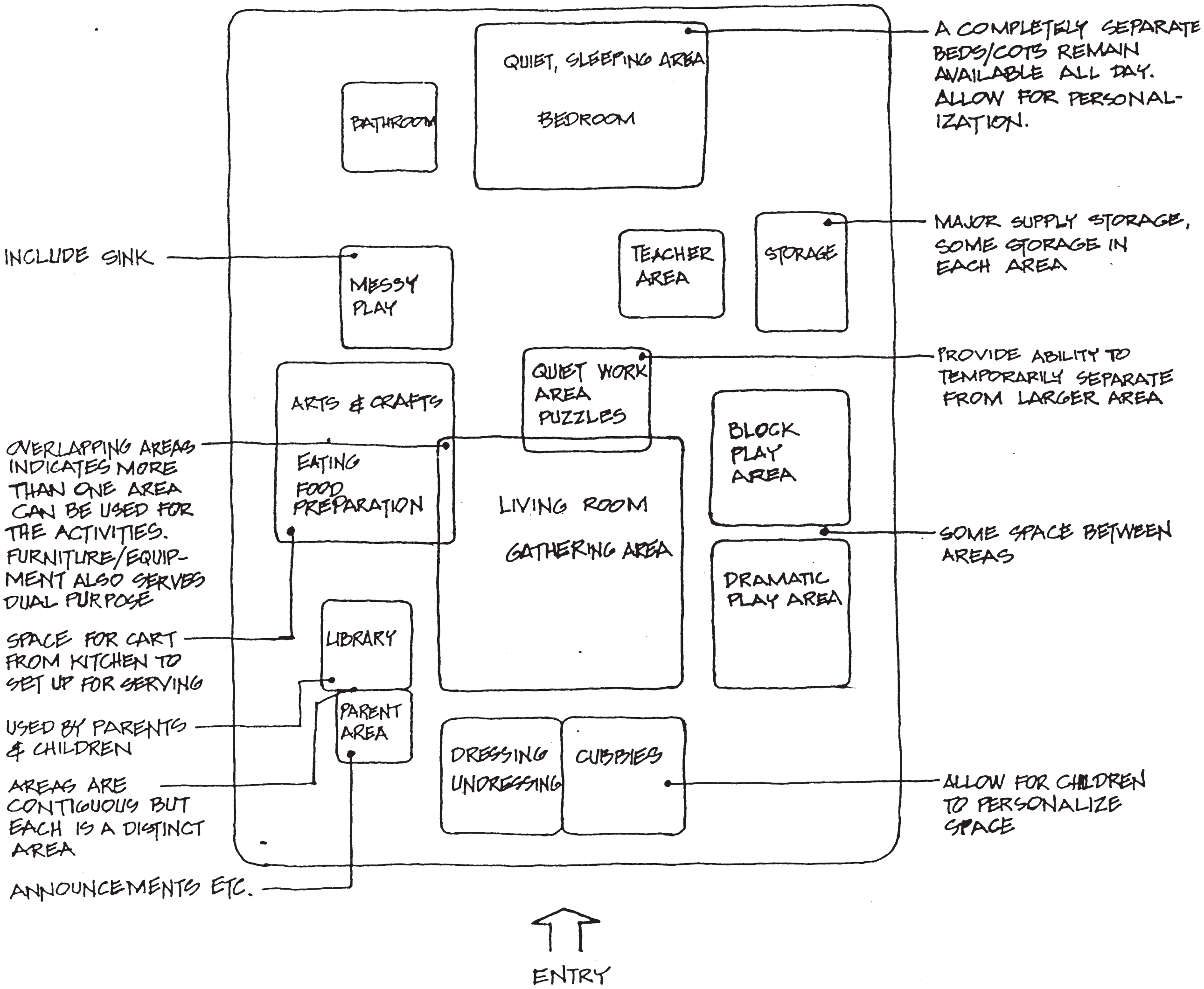
This exercise can also be used to plan a child care center. When planning a center, each bubble or shape will represent a space or room to be included. Here, too, consider what spaces should and should not be next to each other. You can also indicate on your diagram what spaces need direct access to the outdoors and what spaces need access to corridors.

Outdoor Play Areas

This exercise can be used to plan your outdoor play area as well. Each bubble or shape will represent an activity or piece of equipment. Use Section 4 to plan your outdoor play area.

Sample Bubble Diagram

Preschool Classroom



A COMPLETELY SEPARATE BEDS/COTS REMAIN AVAILABLE ALL DAY. ALLOW FOR PERSONALIZATION.

MAJOR SUPPLY STORAGE, SOME STORAGE IN EACH AREA

PROVIDE ABILITY TO TEMPORARILY SEPARATE FROM LARGER AREA

SOME SPACE BETWEEN AREAS

ALLOW FOR CHILDREN TO PERSONALIZE SPACE

INCLUDE SINK

OVERLAPPING AREAS INDICATES MORE THAN ONE AREA CAN BE USED FOR THE ACTIVITIES. FURNITURE/EQUIPMENT ALSO SERVES DUAL PURPOSE

SPACE FOR CART FROM KITCHEN TO SET UP FOR SERVING

USED BY PARENTS & CHILDREN

AREAS ARE CONTIGUOUS BUT EACH IS A DISTINCT AREA

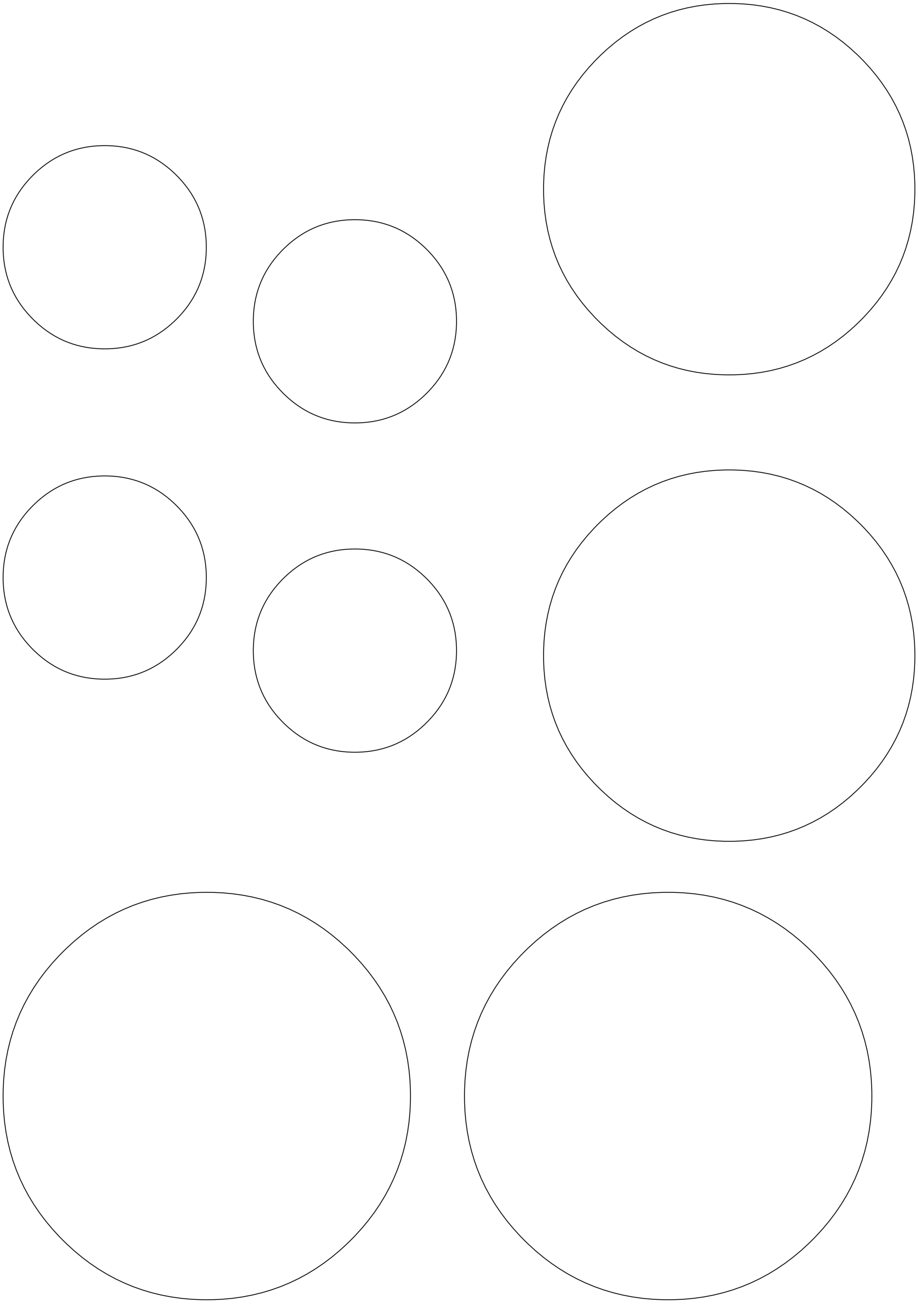
ANNOUNCEMENTS ETC.

Design Exercise B

Design Exercise B will help you develop a scaled plan for your classroom. The outline of the playroom/classroom provided in this manual represents a space big enough for 18 three- to five-year-old children. The cutout shapes are also to scale for this age. The sheets labeled “A” contain shapes that represent different activities and areas in a classroom. Consult the goals and activities you identified in **Exercise 5** to choose the activities that will need space in your classroom. Cut out the appropriate shapes and label each shape. If you think the activity will require more space, make duplicates of sheets A so that you will have multiple copies of each shape. Locate the entries (more than one entry if you plan on direct access to the outdoors) and indicate window locations. Next, arrange the activity shapes on Sheet B. The space delineated on Sheet B is scaled for a 900-square-foot room. When arranging the room think about adjacency issues, circulation paths, visibility, and supervision. Be sure to leave space for circulation; one square or one and a half squares will allow for circulation between activities. Use two or three hundred-foot-square-foot squares for large group activities. Use the Key for Design Exercise B when determining the amount of space needed for various activities.

A

A



B Classroom

Key for Design Exercise B

Large square represents	100 square feet
Small square represents	25 square feet
Large circle represents	100 square feet
Medium circle represents	60 square feet
Small circle represents	25 square feet
Rectangle represents	60 square feet

Possible Areas to Consider for a Preschool Classroom

Dramatic play

Blocks/Construction

Manipulatives

Language

Listening

Music

Art

Movement

Sensory play

Toileting

Eating

Resting

Science

Writing

Transition/drop off

Adult area

Activity Area Checklist

Use this checklist to help plan the activity areas and other classroom areas. This checklist is applicable to settings for children three to five years old. Make appropriate adjustments for use with younger or older children. Be sure that all settings accommodate children with disabilities.

ACTIVITY AREA	SETTING	YES	NO
Art	Area is out of circulation path	___	___
	Low tables and easels	___	___
	Spaces for 3 to 5 children	___	___
	Storage is accessible to children	___	___
	Variety of materials (not just paint)	___	___
	Drying and display area	___	___
	Floor and surfaces easy to clean	___	___
	Sink adjacent to area	___	___
	Natural lighting	___	___
	Smocks accessible to children	___	___
Block play	Adequate floor area for group and individual play	___	___
	Area is out of circulation path	___	___
	Block storage is accessible to children	___	___
	Blocks are stored in an identifiable order (sorted by shape and size)	___	___
	Adequate number of blocks	___	___
	Adequate accessories for block play	___	___
	Area is protected so that children can leave their projects up overnight	___	___
	Area is accessible to dramatic play area for interactive play opportunities	___	___

ACTIVITY AREA	SETTING	YES	NO
Construction	Area is out of circulation path	___	___
	Area accommodates 3 to 4 children	___	___
	Low work tables are provided	___	___
	Materials and tools are stored where accessible to children	___	___
	Hazardous materials are stored out of children's reach	___	___
	Display area is visible to children	___	___
	Area can be observed by adults unobtrusively	___	___
Cooking	Adequate space and materials for small group activity and adult supervision	___	___
	Low work surfaces	___	___
	Sink and waste disposal adjacent	___	___
	Out of circulation path	___	___
	Area visible from other areas	___	___
	Appropriate storage	___	___
	Surfaces and floor easy to clean	___	___
	Appropriate equipment and tools	___	___
Dramatic play	Space adequate for small group play	___	___
	Furniture, props, equipment (e.g., loft) help to define the area	___	___
	Area located away from quiet areas	___	___
	Variety of toys, materials, clothing available and accessible	___	___
	Toys and materials suggest more than one play theme	___	___
	Toys and materials encourage both boys and girls to use the area	___	___
	Furniture, props can be moved by children	___	___

ACTIVITY AREA	SETTING	YES	NO
Indoor active	Area separate from circulation path	___	___
	Area is acoustically separate from quiet areas	___	___
	Flooring is soft	___	___
	Equipment is age appropriate	___	___
	Equipment can be arranged by adults and children for different levels of challenge and competence	___	___
	A variety of props are available	___	___
Listening	Private area separate from circulation path	___	___
	Furniture or architectural features define the space	___	___
	Comfortable seating and flooring	___	___
	Acoustically separate from noisy areas	___	___
	Appropriate equipment and materials available	___	___
	Storage areas accessible to children	___	___
Manipulative play	Adequate space for children to work alone or in small groups	___	___
	Area is free from distractions	___	___
	Adequate floor space, low tables	___	___
	Variety of materials	___	___
	Materials stored in identifiable order	___	___
	Storage accessible to children	___	___
	Good lighting	___	___
Math	Adequate space for children to work alone or in small groups	___	___
	Area is free from visual and noise distractions	___	___
	Appropriate materials available	___	___
	Storage accessible to children	___	___
	Low work tables	___	___

ACTIVITY AREA	SETTING	YES	NO
	Display space	___	___
	Area adjacent to science area	___	___
Music and movement	Adequate space for large group activity	___	___
	Area away from quiet activities	___	___
	Appropriate flooring	___	___
	Props (instruments) and equipment available to children	___	___
	Storage available	___	___
Prereading and writing	Area away from noisy activities	___	___
	Comfortable, movable seating	___	___
	Area is cozy and attractive	___	___
	Books and other props displayed attractively and accessible to children	___	___
	Variety of books to reflect different interests, themes, cultures	___	___
	Writing surfaces and materials	___	___
	Computer	___	___
	Good lighting	___	___
Sand/water	Appropriate space for sand/water table and 5 to 6 children	___	___
	Easy-to clean, nonslip floor	___	___
	Sink adjacent to area	___	___
	Area not in circulation path	___	___
	Area visible from adjacent areas	___	___
	Accessible storage for play props	___	___
	Area adjacent to science area	___	___
	Optional: area adjacent to protected outdoors area	___	___

ACTIVITY AREA	SETTING	YES	NO
Science	Area away from circulation path	___	___
	Low work tables	___	___
	Equipment and materials arranged to encourage experimentation	___	___
	Materials include those purchased, teacher-made, and gathered by children	___	___
	Adjacent to water/sand play area	___	___
	Sink available to the area	___	___
	Storage accessible to children	___	___
	Potentially hazardous materials in locked storage	___	___
	Optional: area adjacent to protected outdoors area	___	___
Other areas			
Toileting	Area adjacent to playroom	___	___
	Area accessible for children to use independently	___	___
	Private area for toileting children with disabilities	___	___
	Sinks and toilets accessible to all children	___	___
	Area clean and easily cleanable	___	___
	Mirror	___	___
	Provision for both privacy and adult supervision	___	___
	Drinking water available for children	___	___
Personal storage	Separate space for each child	___	___
	Adequately sized for clothing, boots, personal items	___	___
	Child's name/picture	___	___
	Child can personalize the space	___	___
	Space located near entrance	___	___

Adapted from Henry Sanoff, *Creating Environments for Young Children* (Raleigh: North Carolina State University, 1995).

Additional Classroom Issues

In addition to the room arrangement, other aspects of the classroom setting that need to be considered are lighting, displays, complexity, texture, and safety.

Lighting

classroom is well lit

natural light is provided

some windows are child height (make sure screens and protective coverings are provided)

artificial and natural light can be controlled

avoid glare

use task or spot lighting if necessary

Displays

walls are neutral color to highlight displays

all levels of children's work are displayed (not just "perfect" looking items)

some teacher-made work is displayed

displays are visually accessible to children

displays are changed periodically

purchased display material is kept to a minimum

Complexity

complexity is achieved through variety

a moderate amount of complexity provides interest to children and encourages exploration

too much complexity is overstimulating and confusing

complexity can be provided with a variety in activities, materials, floor height (sunken areas), ceiling height, floor coverings, and shape of spaces

the environment has a certain amount of predictability

Texture

a variety of textures

soft seating, hard seating

water, sand, dirt, grass

wood, carpeting

Safety

free from potential hazards

challenges provided are appropriate for age and stage of development, for example, climbing equipment with graduated steps and soft, protective surface underneath

Animals in the classroom

Children's exposure to animals should teach respect for all life. A bird feeder outside a window so that children can see different birds during the year might be preferable to a bird confined to a cage in the classroom. If animals are kept in the classroom, the animal and the children must be kept free from hazards. Children can, and should, help care for an animal but should not be allowed to harm the animal. Likewise, children's safety and well-being must also be guarded.

Table 1. Relationship between Goals, Activities, and the Physical Environment

GOAL	ACTIVITY	PHYSICAL ENVIRONMENT
Intellectual development *symbolic play*	dramatic play	designated area with literal props and miscellaneous materials
	reading readiness	library corner with books arranged attractively, tape recorders, puppets
logical thought	classification	shelves accessible to children where toys are arranged by size, color, or shape
Problem solving	free play	areas designed to use materials such as paint, dough, sand; areas for fantasy play; areas for constructing
Motor development	large movement	place for climbing, balancing; mats for jumping and tumbling; place for bowling
Peer interaction	dramatic play	designated area with sufficient materials and sized for small groups
	blocks	space to support 4 to 6 children; ability for children to arrange their own small group areas
Development of self-expression	opportunity for self-esteem	space within the classroom that children can personalize; place to use open-ended materials; comfortable places to retreat to
	independent action	furnishings, toilets, sinks sized for children with a range of abilities
Self-control	grooming and toileting	toilet areas easily accessible without adult assistance, mirrors for children, drinking fountains
	large movement	classroom arranged to discourage running through activity areas, clearly designated places for large movement activities, places available for children to take their own “time out”

Table 2. Issues to Be Considered When Planning Activity Centers and Classroom Arrangement

ISSUE	WHY IT IS IMPORTANT
Closure of spaces: Are activity centers physically and visually enclosed and separate from each other?	Moderate enclosure reduces group size and encourages concentration.
Spatial separation: Are there room dividers, furniture, and level changes to divide the activity centers from each other?	Moderate separation reduces group size, provides variety in areas, and reduces interruption.
Visual connection: Are the activity centers visually accessible to each other?	Children can see play opportunities. Children have visual access to caregivers.
Size of spaces: Are the activity centers appropriately sized for the activity?	Appropriate size reduces competition and allows all children in the group to participate.
Circulation paths: Are there clear circulation paths, separate from the activity centers?	Clear paths reduce interruption, encourage concentration, and help make the classroom navigable.
Privacy: Is there quiet space available that is protected from intrusion?	Helps children control social interactions, fosters self-control, and reduces effects of large group size.
Seating: Is there a variety of seating and working positions within the activity center?	Accommodates children's different styles and needs.
Surfaces: Are there appropriate surfaces for work, display, and storage in each activity center?	Appropriate surfaces available to children will reduce the need for disciplinary actions.
Outdoor spaces: Are there visual and accessible connections between indoor and outdoor activity areas?	Provides for outdoor play, views of nature and the elements, and opportunity for personal restoration and reflection.
Flexibility: Are the activity centers flexible for a change in arrangement?	Allows for variety in activities. Children should be able to initiate some of the changes to accommodate their needs.
Scale: Is the environment (doors, windows, furniture, toilet fixtures, work surfaces) scaled to child sizes? Is it appropriate for children with disabilities?	Appropriate scale helps develop competency and self-esteem. Challenges are appropriate to developmental stage and age. Increases classroom safety.

Table 2. Continued

ISSUE	WHY IT IS IMPORTANT
Storage: Are furnishings and materials appropriate for each activity center directly accessible to children?	Children can get and return materials themselves. Helps to develop self-esteem and independence. Increases classroom safety.
Display: Is the children's work displayed at a child's eye level? Is all work displayed? Is display changed periodically?	Respect for all children's abilities helps to develop self-esteem; emphasizes process, not outcome. Provides visual variety.
Staff areas: Are staff areas physically and visually separated from children's areas?	Respect for adults' needs. Increases safety for children.
Entry: Are the major activity centers visible from the entry?	Helps children to feel comfortable and secure.

Adapted from Gary Moore, *Early Childhood Physical Environment Observation Schedule and Rating Scale* (Milwaukee: Center for Architecture and Urban Planning Research, University of Wisconsin-Milwaukee, 1994).

SECTION 3

Designing a Child Care Center

This section is useful for

1. child care providers working with infants through children nine years of age.
2. center providers, school-age care providers.

In this section you will learn

1. how to plan a new child care center.
2. how to work with an architect.

Exercises

10. Goals and Space Requirements for the Center
11. Specific Space Requirements

Handouts

Table 3: Items to Include in a Goal Statement for a Child Care Center
Table 4: Goals in Relation to Space Required
Table 5: Additional Space Needs
Table 6: Site Selection Issues
Table 7: Scope of Work for Architect and Designer
Table 8: Tasks for the Architect

Statement of Goals for the Center

Many different people play a role in the planning and design of a child care center, whether it is new construction or renovation of existing space. Architects, engineers, interior designers, landscape designers, playground planners, teachers and other child care workers, and parents all have something to contribute. Government and child care agencies and organizations also have a place in the process.

For a new child care center, a planning team should be formed consisting of the center director, staff, child care professionals, parents, and interested community members. The team can solicit input from others as well. The planning team can begin the design process by clearly stating the goals for the center. In the planning process described earlier in this manual, program and developmental goals were identified related to classroom activities and arrangements. Now the task is to think about goals for the entire center. The goal statement should include the following (see **Table 3**):

- Specific purpose of the center, if any (e.g., a drop-in program, college lab)
- Number of children to be served (might this number change?). The optimal size of a child care center is 50 to 75 children; larger centers should be broken down into smaller units of 50 to 75 children.
- Ages of children to be served (will you serve infants? how young?)
- Number of different groupings of children (e.g., one group each of infants, toddlers, and preschoolers)
- Community that the center will serve (e.g., a specific employer, neighborhood, or college campus)
- Days and hours of operation
- Type and number of meals to be served (e.g., lunch and snacks, prepared on site)

- Educational philosophy (i.e., Montessori, open classroom)
- Relationship to be fostered with parents and guardians
- Relationship to be fostered with surrounding community (see **Table 3**)

When developing goals, remember that adults in a child care center have needs that must be planned for. Include all of your goals in this statement.

Once the goal statement is complete, the team can begin to develop an architectural or space program that identifies the spaces to be included in the center. The number and type of spaces should have a direct relationship to the center's goals. **Table 4** illustrates this point.

Space Program

There are two steps in creating the space program for the center. First, prepare a chart similar to **Table 4** by using **Exercise 10**. List the goals in one column and the space needed to fulfill them in the other column. Second, use **Exercise 11** to describe the requirements for each of the spaces in the center. Describe each space on a separate sheet. Completing a sheet for each space will help the planning team think about the importance of the physical environment. When this task is completed the planning team will have a list of the types of spaces that should be included in the child care center.

When developing the list of spaces in the center do not forget to plan for the following needs (see **Table 5**):

- Children with disabilities must be able to attend the center; this has implications for the classroom spaces, access to the building and all spaces within the building, and access to outdoor play opportunities.
- Staff need a place to put personal belongings, a place to rest away from the children, a place to talk privately with parents, a separate toilet, a telephone, a place for administrative functions, and parking; accommodations must be provided for staff persons with disabilities.
- Parents need a place to get information about community activities, resources (job opportunities, baby-sitters, good places to buy children's clothing, where to get a car repaired, and so on), a toilet, a place for private conversations, parking, and access for persons with disabilities.
- A place needs to be set aside where a sick child can wait until a parent or guardian comes, away from the group but where the child can be observed by a staff person.
- Provision must be made for storing equipment, food, files, materials (some storage in classrooms, some outside classrooms), strollers, and car seats.
- Allot sufficient space for janitorial needs away from other staff areas and not accessible to children.
- Consider adding an observational window in one or more classrooms for educational and training needs. These spaces can be used for in-service training or by parents. Since this form of observing children may be considered unethical by some people, be sure to discuss it with all members of the planning team.

Site Selection

If the child care center is new construction, the planning team should be involved in site selection. The goal statement should be consulted when evaluating sites. For example, if a goal is to serve a particular business community, the site should be easily accessible to that community. Jim Greenman in *Caring Spaces, Learning Places* suggests that a planning team consider the following issues related to site selection:

- Clients/customers: Who is to be served? Where do they live and work?
- Zoning: Is the area zoned for child care? How much off-street parking will be required?
- Access and visibility: Visibility may be important for new programs and programs that are seeking to attract new families. Access, the ease of actually using the program, is important for any program. Is accessibility to public transportation an issue?
- Ownership: What are the advantages of owning the facility? What are the advantages of leasing a facility?
- Cost: The cost of buying or leasing the site, utility connections, and property taxes have to be within the program's range.
- Other site issues to consider:

Size: Is it large enough for the program?

Availability of open space: Will the site accommodate outdoor play?

Adjacent uses: Are the adjacent buildings or open space compatible with a child care facility? Are there potential hazards?

Parking: Is sufficient space available for parking for staff and parents? Is the center easily accessible for vendors making deliveries?

Use **Table 6** as a handout.

The Image Presented by the Building

The outside of a building can communicate a lot about what goes on inside. We all have expectations about what a church building, an office building, a courthouse, or a school looks like. What does a child care center look like? There is probably no one image. It will depend on the size of the community (rural, suburban, large city), type of community (residential, commercial), and perhaps the ethnic composition of the community. A child care center should communicate a sense of welcome to the children and their families.

A child care center may be a stand-alone building or it may be part of another building. Either way, the entry should be easily identifiable to the children so that they can develop a sense of connection to the center (e.g., "The building with the red door is where I go to play"). If the center is a stand-alone building it should also be compatible with the surrounding buildings and community. This is referred to as the scale of the building. The scale may be different in a small town than in a large city. Children become familiar with the scale of buildings in their home community. The building and, in particular the entry, should be recognizable to children.

Ask workshop participants to describe the image they think is important for a child care center in their community.

Working with an Architect

At some point when developing a new center the services of design professionals will be required. Projects often require a designer (architect or interior designer), an engineer, and sometimes a landscape designer or playground planner. The planning team can hire each of these services separately or as a team. There are two ways the planning team can get started. First, if the team (or individual members on the team) has worked with a particular architectural or interior design firm before and was pleased with the results, they may wish to work with this firm again. Second, the team may solicit proposals from several firms. The list of firms can be developed by asking others in the community for referrals. In either case the team should prepare a scope of work indicating

- the type of project, e.g., child care center, new construction.
- time frame, e.g., beginning in January 1998 and opening in September 1999.
- sponsoring agency/owner.
- architect's responsibilities (e.g., building design only, building and play yard).
- services the firm provides (e.g., architecture, engineering, interiors).
- site to be used (or if architect is to assist with site selection).
- budget limitations, if any.
- child care center goal statement (including anticipated number of children to be served).

Use **Table 7** as a handout.

Proposals can be solicited from one or several firms. The proposals should be judged by how well they respond to the scope of work, the firm's previous experience with similar building types, references, and fee. Familiarity with child care centers is particularly helpful. Firms with experience only with designing schools may not be appropriate, although they should not be discounted. A firm may have a low fee but have no experience with buildings for children and not indicate that it can adhere to the committee's time frame. Therefore, in spite of the low fee, this may not be a good firm to hire.

Once an architect is hired, the planning team should establish a regular meeting schedule to make sure that communication is kept open. The architect should know who on the team is responsible for decisions on a daily basis and for the final design. The team should know who in the architect's office is responsible for the project so that that person can be contacted when necessary.

The goal statement should be reviewed with the architect to be sure that goals have not changed and that the architect understands them. The architectural program developed by the planning team also should be shared with the architect. This program may change if the goals change or the architect may have other suggestions as to how to meet the goals. The architectural program developed by the team should serve as a guide. A final architectural program, including square footage for each space, will be developed by the architect and should be approved by the team before design begins.

The planning team should make sure that the architect understands all licensing requirements. All buildings must meet local fire, building, safety, and health regulations. In addition, the New York State Department of Social Services, Bureau of Early Childhood Services, or its designee has jurisdiction over child care centers and should be contacted early in the design process. Consult the appropriate authority in your state. Before approving the final design, the team should make sure it meets any licensing requirements. If the team wants the center to be accredited by an organization such as the National Association for the Education of Young Children, it must be sure that the architect has all of the information related to design issues for accreditation. The planning team should make sure that the design team is aware of all requirements so that the building is in compliance with the Americans with Disabilities Act (ADA). For a new construction project the architect should perform the following tasks:

1. Review the center's goals with the planning team.

2. Develop an architectural program, which must be approved by the planning team.
3. Prepare schematic design documents, which must be approved by the planning team.
4. Prepare design development documents, which must be approved by the planning team.
5. Prepare project costs.
6. Prepare specifications
7. Prepare bid documents.
8. Supervise construction.
9. Complete the work on time and according to approved drawings.

Use **Table 8** as a handout.

All members of the planning team can make valuable contributions. It is very important to have such a team work with a designer when developing a child care center. The team should not be large but should represent different perspectives (e.g., teachers, parents, administrators). Although children are not on the team, their contributions are important too. Asking children to draw pictures about their favorite place, their center, a playground, or their home can give clues to designers, teachers, and caregivers about what is important to them. A successful center incorporates children's and adult's needs.

EXERCISE 10

Goals and Space Requirements for the Center

List the goals of the center and the space required to fulfill each goal. Use as many pages as necessary.

GOALS	SPACE REQUIRED

EXERCISE 11

Specific Space Requirements

Name of space ____

Occupants using this space ______________________________________

Number of occupants (how many people use this space at one time) ________

Hours of use (number of hours a day) ________

Activity (what happens in this space) ______________________________

____

____

Adjacent spaces (what spaces should be next to this space) ______________

____

Lighting requirements: Artificial ____ Natural ____ Adjustable____

Flooring requirements: Soft____ Hard ____ Easily cleanable____ Other____

(describe) ____

Acoustical requirements: Needs quiet all the time ____
Needs quiet sometimes ____
Generates noise ____
Needs access to main corridor ____
Outdoors ____
Other spaces (name them) ____________________________

Required equipment:

Required built-in furniture:

Required movable furniture:

Special space or equipment needs:

Table 3. Items to Include in a Goal Statement for a Child Care Center

- Specific purpose of the center, if any (e.g., a drop-in program, college lab)
- Number of children to be served (indicate if this number is expected to change); optimal size of centers is 50 to 75 children; larger centers should have smaller units of 50 to 75 children
- Ages of children to be served
- Number of different groupings of children
- Community the center will serve (e.g., a specific employer, a specific neighborhood, a college campus)
- Hours of operation of the center
- Type and number of meals to be served (e.g., lunch and snacks, prepared on site)
- Specific educational philosophy (i.e., Montessori, open classroom), if any
- Relationship to be fostered with parents and guardians
- Relationship to be fostered with surrounding community

Table 4. Goals in Relation to Space Required

GOALS	SPACE REQUIRED
1. 54 children, 3- to 5-year-olds in age-segregated groupings	Three classrooms, one for each age level, with 18 children in each class
2. The center will include families with parents who are in job-training programs and who have been identified by the courts as needing parenting skills	A resource room where parents can sit and talk with others and get information about job opportunities in the community
	A classroom where training sessions can be held during the day
	Appropriate places to hold parent-teacher conferences in private
	Classrooms will have observation booths
3. The center will serve breakfast, two snacks, and lunch. All meals will be prepared on site.	A commercial kitchen with appropriate storage and equipment
4. A modified open classroom philosophy	A space adjacent to all classrooms where age-integrated activities can take place

Table 5. Additional Space Needs

- **Staff needs:** a place to put personal belongings, a place to rest away from the children, a place to talk privately with parents, a separate toilet (handicapped accessible), a telephone, a place for administrative functions, parking, facility should meet needs of persons with disabilities
- **Parents' needs:** a place to get information about parenting issues, community activities, resources, a toilet (handicapped accessible), a place for private conversations, parking, facility should meet needs of persons with disabilities
- **Sick child:** a place to wait until a parent or guardian comes away from the group but where the child can be observed by a staff person
- **Storage:** for equipment, food, files, materials (some storage in classrooms, some outside classrooms), strollers, car seats
- **Janitorial needs:** sufficient space away from other staff areas and not accessible to children
- **Educational and training needs:** consider an observational window in one or more classrooms that can be used for in-service training or by parents

Table 6. Site Selection Issues

- **Clients/customers:** Who is to be served? Where do they live and work?
- **Zoning:** Is the area zoned for child care? How much off-street parking will be required?
- **Access and visibility:** Visibility may be important for new programs and programs that are seeking to attract new families. Access, the ease of actually using the program, is an important factor for any program.
- **Physical access:** Availability of public transportation.
- **Ownership:** What are the advantages of owning the facility? What are the advantages of leasing a facility?
- **Cost:** The cost of buying or leasing the site, utility connections, and property taxes have to be within the program's range.

Other site issues to consider:

- **Size:** Is it large enough for the program?
- **Availability of open space:** Will the site accommodate outdoor play?
- **Adjacent uses:** Are the adjacent buildings or open space compatible with a child care facility? Are there potential hazards?
- **Parking:** Is sufficient space available for parking for staff and parents? Is the center easily accessible for vendors making deliveries?

Table 7. Scope of Work for Architect and Designer

- The type of project, e.g., child care center, new construction
- Time frame, e.g., beginning in January 1998 and opening in September 1999
- Sponsoring agency or owner
- Architect’s responsibilities (e.g., building design only, building and play yard)
- Services the firm provides (e.g., architecture, engineering, interiors)
- Site to be used (or if architect is to assist with site selection)
- Budget limitations, if any
- Child care center goal statement

Table 8. Tasks for the Architect

1. Review the center's goals with the planning team.
2. Develop an architectural program, which must be approved by the planning team.
3. Prepare schematic design documents, which must be approved by the planning team.
4. Prepare design development documents, which must be approved by the planning team.
5. Prepare project costs.
6. Prepare specifications.
7. Prepare bid documents.
8. Supervise construction.
9. Complete the work on time and according to approved drawings.

SECTION 4

Outdoor Play

This section is useful for

1. child care providers for infants through nine years of age.
2. center providers, school-age care providers, and family day care providers.

In this section you will learn

1. the importance of outdoor play for children.
2. how to plan for outdoor play in child care programs.
3. how to make outdoor play inclusive.

Exercises

5. Matching Goals, Activities, and the Environment (Section 2)

Handouts

Table 9:	Outdoor Play Experiences
Table 10:	Physical Features That Promote Diversity and Complexity
Table 11:	Items for Outdoor Play

Outdoor play is an integral part of child care. Ideally, children should have access directly to the outdoors from the classroom/playroom so that outdoor activities can be spontaneous. When looking for a site for the center, its access to the outdoors should be considered (this may be difficult in urban areas). Family day care programs should have a porch, yard, or nearby park available for outdoor play.

The same process of developing goals and activities used for the indoor setting can be used for the outdoor setting (**Exercise 5, Section 2**). Think about what goals and activities go together and plan the play yard accordingly. Use **Design Exercise A** (Section 2) to make a bubble diagram of your outdoor play area. Many indoor activities can also take place outdoors (e.g., dramatic play, art, construction), but the outdoors also offers unique opportunities. If the center is in a large city, try to be sure that some natural elements are incorporated into the play yard. As listed on **Table 9**, the outdoor play area should provide for

- functional play, constructive play, and dramatic play.
- age- and ability-appropriate experiences that also include children with physical disabilities (sand play for a child in a wheelchair, accessibility incorporated into design of play equipment, not as an afterthought).
- activities that permit solitary play, parallel play, associative play, and cooperative play, large group activities.
- activities that challenge physical abilities.
- development of various cognitive concepts such as up/down, high/medium/low, in/out, over/under (children with sight impairment or limited mobility also need opportunities to learn about the movement of their bodies in space).
- development of knowledge and appreciation for natural and nonhuman environments.
- development of gross and fine motor skills.
- safe play.

The physical features of the outdoor setting are important in helping the center achieve its program goals. Some features to consider are listed in **Table 10**.

- Linkages—the relationship of pieces of equipment to each other. Close linkages promote continuous movement and social interaction.
- Flexible materials—materials that can be altered, changed, manipulated, or combined. Loose parts usually provide the most flexibility.
- Graduated challenge—several levels of difficulty for each of the activities offered. Differences should be obvious so that children can choose their level and be able to judge when they can move to a new challenge. The range of challenges should be appropriate for the age and skills of children in the program.
- Variety of experiences—number of different activities available in the playground. Variety helps to ensure that each child will find something to do, encourages more than one type of play, and enhances learning.

A list of items needed for outdoor play is provided to help child care providers plan the outdoor play experience (**Table 11**).

Table 9. Outdoor Play Experiences

- Functional play, constructive play, dramatic play, and group play
- Age- and ability-appropriate experiences
- Activities that permit solitary play, parallel play, associative play, and cooperative play
- Accessibility for children with disabilities
- Activities that challenge physical abilities
- Development of various cognitive concepts such as up/down, high/medium/low, in/out, over/under (children with sight impairment or limited mobility need opportunity to learn about the movement of their bodies in space)
- Development of knowledge and appreciation for natural and nonhuman environments
- Development of gross and fine motor skills
- Safe play

Table 10. Physical Features That Promote Diversity and Complexity

- Linkages—the relationship of pieces of equipment to each other. Close linkages promote continuous movement and social interaction.
- Flexible materials—materials that can be altered, changed, manipulated, or combined. Loose parts (things children can carry from place to place) usually provide the most flexibility.
- Graduated challenge—several levels of difficulty for each of the activities offered. Differences should be obvious so that children can choose their level and be able to judge when they can move to a new challenge. The range of challenges should be appropriate for the age and skills of children in the center.
- Variety of experiences—number of different activities available in the playground. Variety helps to ensure that each child will find something to do, encourages more than one type of play, and enhances learning.

Table 11. Items for Outdoor Play

The following are some suggestions for equipment, materials, or toys for use in outdoor play. Remember that children, not adults, are the focus of the play area. What looks attractive to adults may have little long-term appeal to children. At least some of the equipment and materials should be movable and changeable. Children should be able to make and remake their play area to suit their changing needs. This list is not intended to be all-inclusive. Do not use any toxic materials (such as treated wood) in the outdoor play setting.

Dramatic Play

old vehicles secured in the ground and brightly painted

canvas tents of various shapes and sizes

large modular hollow boxes made of plywood with one side open, forming cubes and pyramids

strong corrugated cardboard appliance boxes

old steering wheels

puppet theater or stage

wooden barrels of different sizes

wooden boxes and packing crates

playhouses built on different levels

lookout tower made of logs

parachute

dress-up clothes

cooking area (to be used under adult supervision and with heights accessible for children with handicaps)

containers (pots, pans, cups, muffin tins, bowls)

folding chairs and tables

Climbing

logs and wooden utility poles of varying heights positioned vertically with notches cut for handgrips and footholds

wooden telephone and electric wire “spools”

logs secured crosswise on each other in orderly layers to form an open pyramid

tree stumps of varying heights left in the ground

rope cargo nets suspended from or stretched between poles or logs or thrown over an old iron swing frame

knotted ropes hanging from tree limbs or other supporting structures (for hanging and swinging also)

sections of utility poles or logs secured vertically in the ground with large dowels inserted every six to ten feet for handgrips and footholds

long wooden ladders positioned horizontally several feet above the ground and extending for fifteen, twenty, or forty feet, supported as necessary by vertical poles

Table 11. Continued

Jumping, Leaping, Hopping

car, motorcycle, truck, and tractor tires vertically positioned or laid flat on the ground

tree stumps left in the ground, sawed off at various heights, and painted bright colors

large vinyl-covered foam pads to fall on or jump

Swinging, Hanging, Sliding

low and high parallel bars of wooden poles or steel bars

a dead tree positioned vertically in the ground with low horizontal limbs

swings with leather or rubber strap seats

a polyethylene slide built into a grassy mound of earth (heights appropriate for infants and toddlers, ramps so children with handicaps can participate)

big slides (to accommodate more than one child at a time) of varying types (tunnels, wavy, straight)

car or motorcycle tires in vertical or horizontal positions hung by ropes or chains from a tree limb or other support structure

Developing Balance

wooden stilts

wooden carpenter's horses (sawhorses)

steel railroad rails laid side by side on the ground for twenty feet or more

logs, 4 by 4s, or 2 by 2s laid end to end on the ground forming straight or angled lines

Throwing

low basketball backboards and baskets

targets painted on outside of buildings where there are no windows

large bull's-eye type target painted on asphalt or concrete ground surface

ground pits of different sizes into which balls, marbles, and other objects can be rolled or thrown

cardboard and wooden barrels, kegs, and boxes placed on the ground into which objects may be thrown

Running, Skipping

ramps made of wood, asphalt, or earth

a maze created by shrub plantings or a wooded slab fence. A foot or more of space left open at the bottom will allow children lost in the maze to "escape"

an oval running track made of asphalt or other hard surface (a softer surface for infants and toddlers)

zigzag lines painted on the ground

Forests and Plants

vegetable garden

climbing trees

natural trail

marsh and pond

picnic site

amphitheater

compost area

Table 11. Continued

gardening tools

watering hose

seeds

Animals and Nature

feeders

bird bath

fish pond

observation shelter

bird houses

corrals

magnifying glasses

binoculars

nets

shovels

rakes

assorted containers

screens

cooking utensils

funnels

soap bubbles

containers for sand and water accessible to children with handicaps

deck and dish for toddlers

Wheeled Vehicles

tricycles

wagons

wheelbarrows

road signs and spare parts

push and pull toys (for infants and toddlers)

pedal cars

specially designed vehicles for children with handicaps

Construction

assorted wood blocks

interlocking plastic blocks

lumber

soft drink bottle crates

cable spools

packing crates

plastic electric spools

assorted tires

sawhorses

Carpentry

hammers, saws

screwdrivers

nails, nuts, washers, bolts

wrenches

carpentry table

paint and brushes

scrap lumber

sandpaper

vise, clamps, brace bits

Resources

Books, Articles, Brochures

American Public Health Association and American Academy of Pediatrics. (1992). *Caring for Our Children: National Health and Safety Performance Standards, Guidelines for Out-of-Home Child Care Programs.* Washington, D.C.: Department of Health and Human Services.

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Weinstein, C. S. (1987). Designing preschool classrooms to support development: Research and reflection. In C. Weinstein and T. David (Eds.), *Spaces for children: The built environment and child development,* 159–95. New York: Plenum Press.

Community Resources

County Cooperative Extension Association Office

Child Care Resource and Referral Agency

County Day Care and Child Development Council

Community colleges

Department of Social Services

Americans with Disabilities Act (ADA)

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