

COMMON LEISURE ACTIVITIES OF ELEMENTARY SCHOOL AGE  
KANSAS FARM CHILDREN AND THEIR REQUIREMENTS  
FOR SPACE IN THE HOME

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## INTRODUCTION

The average home does not include a separate playroom, and the elementary school age child uses his bedroom as well as other parts of the house for the use and storage of his play materials. If help in planning for such use and storage were available, it is believed that all of the family members would be able to engage in their own activities with greater ease and enjoyment.

A review of literature revealed that little research had been done regarding provisions for the leisure activities of elementary school age children in the plan of the house. Nor had this particular phase of their activities been adequately reported and developed in the Kansas Agricultural Experiment Station project (Organized Research Project No. 288, entitled, "Housing Requirements of Kansas Farm Families with Children") with which the writer was connected. This study aimed to make recommendations and to develop adequate plans for a room that accommodates play activities and storage for the play materials of the elementary school age child in the farm home.

The objectives of the study were:

1. To determine what the common leisure activities of the elementary school age child tend to be in the farm home.
2. To determine the space and location of furniture and play materials required for leisure activities.
3. To suggest room designs and arrangements for selected combinations of leisure activities as suggested by the play materials owned.

## REVIEW OF LITERATURE

In order to understand the needs of the elementary school age child for leisure activities and a place to do them, it is necessary to understand the development of the child himself at that particular age. For that reason, a summary of the thinking of child psychologists and others concerning his development will be presented. In like manner, present tendencies of the design of the farmhouse, and the principles used by those dealing with studies of storage will be summarized. Included also will be the few contributions from research which relate to the leisure of the child or the family, and to space requirements in the home.

## Nature and Growth of the Elementary School Age Child

The family has provided the elementary school age child with the heritage which determines his potentialities. To what extent these potentialities are to be realized is dependent on the home, family, and other environmental influences. The family, with its financial status, educational level, cultural interests, standards and values, provides a unique environment for the child. Breckenridge and Vincent (3) point out the importance of parental influence on the elementary school age child:

Parents provide (or should provide) the child with affection, a sense of 'belongingness', a satisfactory discipline, a working set of good physical and psychologic habits and attitudes. They set the atmosphere for his moral and ethical standards, his physical well-being, his aesthetic appreciations, his concept of family living and his philosophy of life in general.

In discussing the parent-child relationship, Gesell and Ilg (4) emphasize the importance of flexibility. The elementary school age child displays several different stages of response: dependence, demandingness, indifference, worship, and companionship.

As important as his relationship with his family may be, his development is also affected by all other contacts which he has. He comes in contact with a variety of children and adults outside the family. Almy (2) points out that during the years from 6 to 8, the child's groups of friends usually include both boys and girls. As he grows older, until about 12 years of age, his group tends to exclude members of the opposite sex. School, church, and other institutions also have their effect on his development as do organized recreational activities and such means of communication as radio, television, movies, and comics and other books.

The child's mind grasps many kinds of new ideas. He spends much time reading and especially, in the early school years, has a good imagination, putting himself into the stories he reads or hears. As the mind grows, interest increases in games that involve quick-wittedness and memory.

The elementary school age child has reached the stage in his development in which he is no longer completely dependent on the adults around him and has begun to think and reason for himself. While he is still close to his parents he is at the same time striking out for himself, making friends, and exploring many fields. He is active and tremendously interested in the things and life about him. He can take care of himself with little



supervision. He tries out his own abilities and interests and strives for self-confidence and self-reliance. His personality has become increasingly complex and he is difficult to understand. The Children's Bureau (15) expresses these ideas by saying: "He is on the way to becoming a self-contained, self-directed, self-motivated person."

In order to understand why the child thinks and acts in the manner he does, it is necessary to have some knowledge of his physical development. For the most part his growth is relatively slow and uniform. The notable exception to this occurs at about 9 years of age for girls and 11 years for boys, when more rapid growth is related to progress toward sexual maturation. There is a less steady rate of gain in weight than in height for the elementary school age child because weight includes soft tissues and water, as well as bone, and is influenced by such factors as diet, illness, and emotions. It must be pointed out, however, that the elementary school age is a relatively safe and healthy period. Common childhood diseases are no longer dangerous, and the accident rate is strikingly lower than for other age groups.

Heredity sets the potential for physical growth, while health and environment determine the degree to which the potential is achieved. The child's growth is evaluated by studying his progress in relation to his previous status, and by comparing his weight and height with that of other children. Martin (8), from the U. S. Department of Health, Education, and Welfare, summarizes the weight and height of children as follows:

Age in years	Sex	Weight in pounds	Height in inches (with shoes)
6	Boys	47.7	46.0
	Girls	46.8	45.8
7	Boys	55.7	48.9
	Girls	51.3	48.2
8	Boys	62.3	51.0
	Girls	60.7	51.0
9	Boys	70.3	53.6
	Girls	66.3	52.7
10	Boys	77.6	55.2
	Girls	76.3	55.5
11	Boys	87.8	57.6
	Girls	88.2	58.4
12	Boys	92.5	58.7
	Girls	98.4	60.4

During school age, skeletal development is progressing, with bones continuing to grow and to change shape. They are more pliable and elastic than those of adults, according to Millard (10), and although fracture is less likely, there is more opportunity for deformity. Girls tend to be about two years advanced over boys in skeletal development. Deformity due to poor postural habits caused by unsuitable furniture design is especially important. Muscles of the elementary school age child develop rapidly. The Children's Bureau (15) points out that most activities of the first school years are activities of the whole body, but, as control of the arm, leg, and back muscles is gained, play makes more and more use of finer coordinations. After good muscle control has been acquired, the child uses much energy to learn new skills and improve his abilities. He participates in a variety of



activities, especially those requiring physical alertness and those in which he can construct things.

To summarize, Breckenridge and Vincent (3) say of elementary school age children: "They have a great need for activity, both physical and mental. Control over the body proceeds rapidly as the child practices physical skills by the hour. Control over the mind is also challenging, and most children enjoy the feeling of having learned new and difficult things." Thus, each elementary school age child, unique in temperament, intelligence, and physical makeup, is being prepared for independent living through the influences of his family and the environment outside his family.

#### Housing Arrangements as Affected by Leisure Activities of the Elementary School Age Child

Healthful housing meets the psychological and physiological needs of the child. Psychological needs include sufficient privacy and opportunities for normal family life; physiological needs involve provision for play, exercise, and such other physical features as suitable light, temperature, sanitation, and quietness. These are provisions which have been commonly accepted.

An increase in the amount of leisure available both to adults and children have made further demands on the usual dwelling. Household appliances and equipment have eliminated many of the chores that in years past were the responsibility of the elementary school age child. The value of play to the child has attained greater importance.

Play is important to the mental growth of the elementary school age child and serves as an outlet for his energy. Concerning play, Gesell and Ilg (4) wrote: "It rises spontaneously out of instinctive promptings which represent developmental needs. It prepares for maturity. It is a natural enjoyable exercise of growing powers." Play offers the child an opportunity for self-expression, for organizing his abilities, for showing his individuality and potentialities. It is as important to growth as is food and sleep. Further acknowledgment of its value is noted by the Children's Bureau (15):

Play is the stuff of which a child's life is made. It uses every ounce of his energy. It encourages his imagination. It develops skills of both body and mind. It brings about understanding, warmth, and sympathy toward others.

There are variations in the play patterns of children. These variations, according to Gesell and Ilg (4), are based primarily on age but individual differences, sex differences, and cultural influences also have an effect. Children of high intelligence tend to reflect their chronological age in many of their spontaneous play interests, showing how basically significant play is to development.

It is seen that play activities provide the elementary school age child with the opportunity to think, create, imitate, and engage in physical activity, all of which is important to his mental and physical development. All of these activities require space for their performance. In addition, children of both sexes acquire many items of play materials which require furniture or other storage devices for their maintenance.

Although only a few studies have been made of the use of the rural home for the leisure activities of the elementary school age child, there has been some study of the leisure activities of the family as a whole, and for the preschool child. Leisure activities, according to Grady, et al. (5), are as varied as are the individuals and families. They are vigorous or quiet, shared or independent, planned or casual. They may require much space or little, special equipment or none.

A few studies have been concerned with parts of the house used for the leisure activities of the family or of individuals. According to a study of Michigan farm homes by Thorpe and Gross (13), most of the daytime family living, consisting largely of leisure activities, occurred in the kitchen, living room, and dining room. For that reason, they believed that these rooms deserve the greatest amount of attention in house planning. Bedrooms received only a small part, 9 percent, of the total daytime family living in the Michigan homes studied, but these were old houses, where heating the bedrooms in winter was often a problem. A few of the children's bedrooms contained such items as desks, radios, and bookcases. This seemed to indicate at least an attempt to make these rooms usable for something other than sleeping. It is possible that in better heated, modern houses, bedrooms with sufficient space might be used for a greater variety of activities.

In a similar manner in Pennsylvania farm homes, the kitchen, living room, dining room, bedroom, and bath were used for many purposes other than the conventional activities for which they

were designed (Nolan and John, 12). In all rooms, leisure activities of adults and children were included.

Studies of the leisure activities of children pointed out the need for using the child's bedroom for these activities and for storing play materials. In addition, there was recognition of the need to make all facilities adaptable for use throughout the various age levels. The need for storage in the child's bedroom is shown by Grady et al. (5). They point out that temporary collections of a miscellaneous nature require no permanent display space, but because of their sacredness to the child, they should be stored in his own room where they can be enjoyed in privacy. In summarizing the needs of preschool children in the Western region of the United States, Johnson (7) emphasizes the importance of storage space for play materials:

Since approximately two-thirds of the farm families in the Western area have need for storage space for the possessions of their children for a considerable period of time, since play is vital to the development of the child and such an important element in his day, and since peace, harmony, and a restful home atmosphere are to a considerable extent dependent upon orderliness, it would seem imperative that provision be made in planning the rural home for play space for the young child and for storage space for his play materials. This space could be modified to fit his changing needs as he grows older.

The use of the child's bedroom for his leisure activities, and the necessity for this room to continue meeting the ever-changing needs and interests of the child as he grows older, is indicated by Trotter (14):

A room of his own for the preschool child is what the parents of this study want for their child, and is the ideal desired by many others. A room that can be used for playing as well as sleeping solves many management problems for the mother. It should be a room which will continue to serve his needs as he grows up.

### Tendencies of Design for the Farmhouse

There are many aspects of housing that are common both to farm and non-farm living. The design of the house should provide for all of the usual activities of the family and should reflect the increased emphasis on leisure activities. Certain aspects of housing are peculiar to farm living. There, more than other places, the business of the family is connected with the home. The design of the farmhouse should facilitate the farm connected activities.

Good housing, farm or non-farm, makes many valuable contributions to family life. The following quotation from Agan (1), with its reference to housing in general, also reflects the provisions that good housing makes for farm living.

Thus it seems that housing may affect family life as it provides adequately or inadequately for the private order which includes the whole of family life and the recreational and social activities centered about family life. Housing should provide for rest, quiet, relaxation and a sense of peace, opportunity for self-expression and freedom of action, the routine activities of the home, and companionship in the home. It should provide for satisfying social contact between members of the family and the world outside. The house should remain important as background; it should not become a fetish that hampers rather than contributes to the life of the group.

In the choice of a farm, major consideration is given to the suitability of the land for the type of farming in which the



farmer wishes to engage. A suitable location for the farmhouse receives minor consideration. As a matter of fact, most farms are now well established with a farmstead already developed. The farmstead may have been so located because of particular features such as water supply, topography, and nearness to school, church, neighbors, shopping or marketing facilities. Existing trees, roads, or usable buildings may require that the present location of the farmstead remain where it is. If a new house is being considered, it might be desirable to give thought to the most favorable location on the farmstead.

One of the most important attributes of a farmhouse is its capacity to be changed. A well-built house should last for 50 to 60 years, which is longer than any one family or succession of families would wish for it to be without change. A type of roof construction which places the load of the structure on the exterior walls permits placing interior walls at any place desired. If the location of such utilities as can be provided is judiciously arranged in the beginning, replacement of later and better models can be accomplished without major reorganization. Improved equipment, appliances, and utilities make an important contribution to the health, comfort, and convenience of the farm family.

A well-designed farmhouse would seem to be one which creates pleasant and convenient living conditions for the family members. Needs that are important to farm life include outdoor planning that makes it convenient for visitors to come to the main entrance; a service entry, wash-up place, and a work-clothes closet convenient for the outdoor-indoor trips each day; a driveway and



garage near the house to keep the family car near-by; and accommodations for large groups of guests, group meetings, children's play, and pursuit of hobbies. In addition to these, Hodgell (6) points out that many farm families want and need a place to eat in the kitchen, or near-by, as well as a more formal dining area. They usually want at least three bedrooms, not only to accommodate family members but also for frequent overnight guests.

A workable plan for a farmhouse should supply all of these needs and organize the space to provide for three functions: the work required to maintain the house and the family; the recreation and social life of the family members among themselves and with others; and privacy and rest for family members. To connect areas allocated for these functions, control of traffic between and through these areas is important. According to Hodgell (6), traffic ways that connect one part of the farmhouse with another are sometimes confined in halls or on stairs but they may have to go through rooms. The most direct route of passageway is along one edge or across one corner of a room. This prevents disturbing normal activities by those people passing through.

In bedroom planning, the general tendency is to plan either a room that has only enough space for sleeping and dressing, with all other activities allocated to other rooms, or to plan a room large enough to provide for many activities in addition to sleeping and dressing. The tendency is to have the bedroom door near a corner of the room, a closet nearby, and windows arranged so that there is sufficient wall space to allow putting the bed in

more than one place.

### Storage Principles and Standards

Adequate storage facilities contribute to the usefulness and beauty of recreational areas and improve the general appearance of the home. In their work on storage units for linens, Woolrich and Herrington (16) point out that "current building trends toward compact houses--many without basement or attic--and increased acceptance of functional planning have focused attention on the need for planned storage areas."

Space that is planned especially for the storage of the elementary school age child's play materials contributes to the convenience of play and offers an opportunity to develop habits of orderliness. The importance of storage of play materials is reflected by Johnson (7) who says: "To have a place of his own for play and for his playthings gives the child a feeling of security that is essential to his happiness." Agan (1) expresses a similar idea:

For many generations the place for toys has been a toy box, possibly wooden, which is kept in an inconspicuous location. At first the toys are piled into it by the mother to bring order into the room. Later the child may be taught to collect his toys and place them there. This arrangement enables one to keep the room in order, but it has the disadvantages of limiting sharply the lifetime of many of the toys, or giving the child poor training in the care of his possessions, and substituting clearing up for order in his experiences.

To the present time little work has been published concerning the storage of play materials for the elementary school age child. However, studies of household storage include principles

applicable to this kind of storage. In most studies, such functional qualities of storage as ease of handling and seeing the item stored, elimination of waste space, and convenience to the place of use are emphasized. McCullough (9) established the desirability of the elimination of waste space in storage by planning units which avoided unnecessary margins in front of and above articles. She recognized the importance of flexibility in storage because types and number of articles vary with different families.

The free space needed in storage was given further consideration by Woolrich, et al. (17) in their study of household textiles. They were concerned not only that waste space be eliminated, but that sufficient clearance be given for ease of handling. They summarize as follows:

For the worker's comfort and convenience, clearances are needed both above and at the sides of the article. There must be sufficient space to place and remove the articles without undue care and precision to provide some degree of visibility, and to protect the worker's arms and hands from scraping against the walls and shelves of the storage facility.

Preliminary work in the laboratory showed that different workers used different amounts of space. Hand size and body mechanics apparently were factors contributing to this variation. The size, weight, and flexibility of the textiles influenced the grasping position of the hands and consequently the amount of free space needed for hand action.

Woolrich et al. (17) found that the amount of clearance allowed for the handling of household linens is 2 1/2 inches. They also found that permanent shelves should be no closer than 7 inches to enable cleaning and refinishing. A clearance of 1 to 3 inches is allowed between and above plan materials for ease in

handling, according to Johnson (7).

To avoid unnecessary stooping or high reaching, the most frequently used articles should be stored at proper heights. Thus, in planning play material storage, consideration is given to the arm reach of the child who uses the storage. Martin (8) states that the maximum reach of the child with arm extended upward at a 45° angle varies from an average of 50.5 inches at 6 years of age to 67.7 inches at 12 years. Thus, the height of the storage units must be planned so that the play materials are within the reach of the 6-year-old child as well as the 12-year-old.

The open-shelf type unit was selected for the storage of the child's toys by most of the investigators because of its convenience of use, ease of construction, and attractive appearance. Johnson (7), in her study of play areas for the preschool child, notes some of the advantages of this type of storage.

Open-shelf toy storage units were planned since these make it possible for even young children to care for their toys and since there is less danger of damage to toys when stored in this way. Open-shelf units are simple in construction and may be built without much difficulty by anyone handy with tools if they were not planned for when the house was built.

The size of the units varied. For toys, Trotter (14) found that open shelves 48 x 19 x 12 inches, with a short shelf on top 27 x 7 x 12 inches, were adequate. In addition, open shelves 24 x 25 x 12 inches were adequate for educational materials, including books, coloring materials, and similar items. For minimum toy storage to be used in a child's bedroom, Johnson (7) found that open shelves 61 1/2 x 29 1/4 x 8 3/4 inches (nominally

9 inches deep) were adequate. For liberal storage in a child's bedroom two units were planned: the first, 44 1/2 x 26 1/4 x 11 3/4 inches (nominally 12 inches deep) and the second 49 1/2 x 26 1/4 x 8 3/4 inches (nominally 9 inches deep) were adequate.

A toy unit 48 x 48 x 12 inches, with bins or drawers at the bottom, was recommended by McCullough (9). The toy storage needs, as found by Monroe (11), were shelves and drawers, plus floor space for extra large items. For toys that could be stored on shelves, she estimates that a depth of 11 1/2 inches (nominally 12 inches) was suitable for a wide variety of toys, books, and other items. Drawers 36 inches wide and 11 1/2 inches deep were found to be acceptable.

In terms of linear feet of shelving, the storage units developed by these workers are summarized in Table 1.

Table 1. Storage units recommended by research workers.

Workers	Linear feet of shelving	
	12 inches deep	9 inches deep
Trotter	14	--
Johnson		
Minimum	--	10
Liberal	10	12
McCullough	12, plus a drawer 4 x 1 x 1 +	--
Monroe (varies)	14 24 30	--



## METHOD OF PROCEDURE

The information used in this study was taken from data collected for the project "Housing Requirements of Kansas Farm Families with Children" (Organized Research Project No. 288, Kansas Agricultural Experiment Station). The data had been collected from a random sample of Kansas farm families, with children, living in 12 counties in the Bluestem belt, a grazing area, and from seven counties in an area predominantly growing wheat. The data for the project had dealt with all phases of the housing requirements of all ages of children. For this study, data were selected dealing with the leisure of families with elementary school age children. These children were considered to include the ages of 6 through 12 years.

In determining the common leisure activities of the elementary school age children, further analysis of the Kansas data was required. Although some of the tabulations had been completed, further tabulation and rearrangement of the data were necessary.

Certain general data for both areas, concerning the farm dwellings and surroundings, were regarded as important because of their effect on the leisure activities of the elementary school age child. The distance of the farmhouse from such community facilities as schools, churches, recreation, and markets was thought to influence the amount of time that the child would spend in activities at home and away. The size of the house, the type of rooms in it, and the room density were studied



because they helped to determine the space available for play and for the storage of play materials. Comfort features such as electricity, running water, bathrooms, telephones, and central heating were also regarded as having a bearing on the leisure time of the child since the presence or absence of these conveniences affects his ability to use the whole house and also affects the number of chores for which he would be responsible.

The data included the usual leisure activities, as well as other activities engaged in while the child was not occupied with the functions of daily living or not in school. Such data revealed information concerning the leisure activities engaged in by family members while spending an evening at home, their desire for privacy, and the supervision or help given the elementary school age child for his lessons or projects. In addition, information was obtained concerning the extent of entertainment of groups of elementary school age children at parties, 4-H clubs, and study clubs. In connection with the leisure of the elementary school age child himself, play activities were noted. It was thought desirable to know what he was doing if he were in the kitchen while the adults were there carrying on the work of the household. Also considered as a part of the time free from school or other activities was the extent to which sewing was carried on by the girls.

In determining the space for the furniture and play materials used by the elementary school age child, as he performed play and other leisure activities, consideration was given to the activities themselves and to play materials as shown in an inventory

which had been included in the Wheat area only. In cases where leisure activities were mentioned which were not reflected in the inventory, certain equipment was assumed to be used. In every case certain furniture was considered to be a part of the room furnishings.

Lists of play materials were determined in order to plan storage for the materials and space for their use in the home. The lists were set up on the basis of minimum and liberal amounts of materials for families with girls and families with boys of elementary school age.

The lists of play materials reported by the families were divided into nine general types: dolls, doll furniture, dress up clothes, mechanical toys, games, craft sets, and educational materials. The educational materials included such items as books, globes, and bulletin boards. The frequency with which each of these types of play materials occurred in the homes of families with girls and with boys was determined.

A frequency distribution of the number of play materials of each of the nine types reported for each of the four groups of families was constructed and the median number of play materials was computed. This produced an average (median) number for each of the nine types of play materials for families with girls and families with boys, in the low and the high quartile groups of families distributed according to the number of the educational type of play materials possessed.

This procedure did not provide recognition of the specific kinds of play materials within each type. For example, all dolls

regardless of whether they were character, small, large, or paper dolls were counted equally. Since the study required the development of a list of representative play materials of the kinds used by these families, it was necessary to devise a formula to determine the proportion in which these various kinds of play materials appeared. The formula gave to each kind its proportionate weight. For example, in the group of families having girls and falling in the high quartile (liberal), the total number of dolls was 198, and the median number 17. The number of paper dolls was only 53, so the number of paper dolls used to represent this group was 5.

The proportion may be shown as follows:

paper dolls : total dolls :: x : median number of dolls

$$53 : 198 :: x : 17$$

$$x = 5$$

By similar computations, character dolls were given a weight of 7, small dolls 3, and large dolls 2, totaling 17 dolls. Similar methods were used for itemizing the kinds in each of the other eight types of play materials for each of the four groups of families. This process permitted the development of a composite list of play materials which was used for the planning of storage space for each of the four groups of families.

To study the space necessary for storing the play materials owned by the elementary school age child, it was necessary to determine dimensions for the play materials used, and for the furniture commonly found in the child's room. Play materials

were measured at local stores, and at the Child Development Laboratory at Kansas State College. In addition, various toy catalogues were consulted. Dimensions for the furniture commonly found in the bedroom of an elementary school age child were obtained from local stores and catalogues.

Storage arrangements for this list of play materials of the determined dimensions were planned to scale in diagrammatic drawings. Storage units for play materials as developed for pre-school children by Johnson (7) and for children of unspecified age by McCullough (9) were tested. These being unsuited for the lists of play materials found in this study, other units were developed.

Many of the common leisure activities in which the elementary school age child participated were distributed throughout the common rooms of the house. It was found, however, that the use and storage of play materials for this age were concentrated in the bedrooms.

The design of any room might be approached by encompassing with walls the space required for use and storage of the materials being studied. For this study, the approach was to use dimensions for bedrooms of small, medium, and large size obtained from Contemporary Farmhouses published by the Technical Committee of the North Central Region (6). Necessary furniture, storage arrangements for play materials representing both girls and boys in the low and high quartiles, and space for using the materials were fitted into bedrooms of these sizes when feasible. When small sized bedrooms were being designed, a few of the play materials

were considered to be stored and used elsewhere. Since no special problems presented themselves in planning storage arrangements for the minimum amounts of play materials in the medium and large sized bedrooms, plans for only the small sized rooms were developed.

## FINDINGS AND DISCUSSION

The information used in this study was derived from data collected for the project "Housing Requirements of Kansas Farm Families with Children" (Organized Research Project No. 288, Kansas Agricultural Experiment Station). Data dealing with the leisure activities of Kansas farm families with elementary school age children living in the Bluestem and Wheat growing areas were separated and studied. Data in the Bluestem area had been collected in the years 1948 to 1951, while the data in the Wheat area was collected in 1953 to 1954.

### General Information

Families. In the total of 376 Kansas farm families with children studied in the project, 265 lived in the Bluestem area, 111 in the Wheat area. Included in these families were 932 children, of which 331 or 35.5 percent were of elementary school age, i.e., from 6 years through 12 years. These were divided almost equally between the sexes, as the 230 elementary school age children living in the Bluestem area consisted of 116 females and 114 males, while the 101 children in the Wheat area included 54 females and 47 males. In the Bluestem area, there were 141



families with elementary school age children, and in the Wheat area, 67 such families.

Of the total number of families, 77.4 percent of the fathers were farmers with no additional type of employment. There was little difference between the Bluestem and the Wheat area in this respect.

Dwellings. The location of any farmhouse in relation to schools, churches, recreation, and markets is important. For families with elementary school age children the location of schools, churches, and recreation may be an indication of whether the children can use these facilities easily. The location of the market is important to the family as a whole and may affect whether the child accompanies the adult, as a form of his recreation away from home.

Most of the farm families were in a favorable location to community facilities. There were some differences between the areas with the Wheat area being in a more favorable position. The families were hampered but little by distance from an improved road because 88 percent of the farmhouses were either on an improved road or a mile or less from it. A summary of the facilities available and their distance from the farm is shown in Table 2.



Table 2. Prevalence of families having schools, churches, recreation, and markets, and the distance from the farm.

Community facilities	: Percentage of families with : elementary school age children	
	: Bluestem	: Wheat
<u>Schools</u>		
Consolidated		
Families having	44.7	51.1
1 mile or less	5.0	5.7
Rural School		
Families having	58.2	11.4
1 mile or less	22.7	1.1
Parochial		
Families having	--	11.4
1 mile or less	--	4.6
<u>Church</u>		
Affiliated	70.8	94.0
5 miles or less	62.4	65.7
<u>Recreation</u>		
Movies		
10 miles or less	21.2	31.3
Other		
10 miles or less	--	27.6
<u>Markets</u>		
To buy		
5 miles or less	30.4	38.8
To sell		
5 miles or less	30.4	51.4

The number and kind of rooms in the house, facilities provided, and room densities are indications of the livability of houses. By these measures the housing of families in the Wheat area was, for the most part, superior to that of families in the

Bluestem area. Their houses were larger, as shown in Table 3, and less crowded than were the houses of families in the Bluestem area. In the Wheat area there was a room density of 1.0 or less in 85.1 percent of the homes, while in the Bluestem area the room density was 1.0 or less in only 80.2 percent of the homes.

Table 3. Mean number of rooms by type and number heated.

Rooms and heat	Mean number	
	Bluestem	Wheat
All rooms	6.2	6.9
Rooms heated	3.7	4.7
All common rooms	2.8	2.9
Common rooms heated	2.5	2.8
All bedrooms	3.3	3.7
Bedrooms heated	1.2	1.9

The number and kind of rooms for common use determines the ease with which family living, including its leisure, can be carried on. In both areas, all had kitchens and a large majority had living rooms, although fewer families in the Wheat area had living rooms. This lack seemed to be compensated in the study as a whole by the presence of studies, dens, or recreation rooms, but possibly they were included in houses already having living rooms. Dining rooms were more common in the Bluestem area than in the Wheat area. In any case if a room were included in the houses in the Wheat area, the room was more likely to be heated than similar rooms in the Bluestem area. Summary is shown in Table 4.

Table 4. Extent of families having certain common rooms and percentage heated.

Common rooms and heat	: Percentage of families with : elementary school age children	
	: Bluestem	: Wheat
Kitchens	100.0	100.0
Heated	92.2	100.0
Living rooms	91.5	88.1
Heated	77.3	83.6
Dining rooms	76.6	67.2
Heated	68.8	67.2
Recreation rooms	6.3	11.9
Heated	2.9	10.4
Studies, dens	3.5	16.4
Heated	2.8	16.4

A higher percentage of families with elementary school age children in the Wheat area had comfort features than did the families in the Bluestem area. While the provision of all of these facilities makes life for the whole family more convenient and pleasant, provision of electricity and central heat have a direct effect on the ease with which leisure activities can be carried on. It should be pointed out, however, that in this latitude with its relatively mild weather, and in this state where gas is easily obtained, satisfactory heating of the house can be supplied by means other than a central appliance. A summary of comfort features is shown in Table 5.

Table 5. Extent of comfort features.

Comfort features	: Percentage of families with : elementary school age children	
	: Bluestem	: Wheat
Telephone	81.6	83.6
Electricity	78.7	95.5
Bathroom	44.0	77.6
Running water	38.3	85.1
Heated running water	27.0	79.1
Central heat	17.7	20.9

## Leisure Activities

Evenings at Home. Families in each of the areas participated in several activities when they were at home together in the evening. Listening to the radio, playing table games, reading, and studying were the activities most commonly done (Table 6).

Table 6. Activities of family members spending evenings at home.

Activities	: Percentage of families with : elementary school age children	
	: Bluestem	: Wheat
Listen to radio*	64.5	73.1
Table games	66.0	73.1
Read	56.7	58.2
Study	45.4	77.6

\* Data were obtained before television became commonly available in these areas.

There were times when some of the family members preferred to be alone. A total of 23.4 percent of the families with elementary school age children in the Bluestem area and 14.9 percent in the Wheat area wished to be alone for some activities. The

bedroom was the place preferred by most families but other rooms used were the dining room and kitchen by families in the Bluestem area, and the living room or den by those in the Wheat area. Activities engaged in while alone were reading, listening to the radio, playing, studying, and doing crafts.

Help Received with Lessons and Projects. Parents helped their elementary school age children with school work, 4-H club work, and music lessons in more than half of the families in the Bluestem area, and over three-fourths of those in the Wheat area. Help with lessons or projects usually took place in the dining room, the living room, and the kitchen, as shown in Table 7.

Table 7. Location of parental help with school work, 4-H club work, and music lessons.

Location	:Percentage of families helping	
	: with lessons and projects	
	: Bluestem	: Wheat
	: (75 families)	: (51 families)
School work		
Dining room	57.3	33.3
Living room	17.3	39.2
Kitchen	16.0	23.5
Bedroom	--	3.9
Breakfast room	--	1.9
4-H Club work		
Dining room	20.0	7.8
Living room	10.7	9.8
Kitchen	10.7	15.6
Outside or barn	--	3.9
Sewing room	--	1.9
Music		
Living room	9.3	43.1
Dining room	1.3	--

Group Entertainment. The farm home was not used extensively by families with elementary school age children as a meeting place for school groups. Only 22 families in the Bluestem area, and 27 in the Wheat area had school parties, and an even smaller number entertained 4-H clubs, or study groups. Many of the families who invited these groups did so only once a year. The time of meeting for most of the groups was in the evening, with the exception of the parties in the Wheat area, most of which took place all day. Over 80 percent of the families with elementary school age children who entertained these groups served refreshments.

Table 8. Frequency and time of day of families entertaining elementary school age groups in the home, and refreshments served.

	Percentage of families entertaining						
	School parties	4-H clubs	Study groups	Bluestem	Wheat	Bluestem	Wheat
Frequency, time of day, and refreshments	(22 families)	(27 families)	(10 families)	(19 families)	(3 families)	(22 families)	(27 families)
Times per year							
1	54.6	48.1	---	50.0	52.6	66.7	
2	13.6	7.4	---	10.0	15.8	33.3	
3 - 4	18.2	18.5	---	10.0	5.3	---	
5 - 8	---	3.7	---	10.0	21.1	---	
Other	4.5	---	---	---	5.3	---	
No answer	9.1	22.2	---	20.0	---	---	
Time of day							
Afternoon	31.8	22.2	---	---	31.6	---	
All day	---	63.0	---	10.0	5.3	---	
Evening	68.2	---	---	30.0	73.7	100.0	
No answer	---	14.8	---	60.0	---	---	
Refreshments							
Served	81.8	96.3	---	90.0	84.6	100.0	
Pot Luck	---	3.7	---	10.0	---	---	



Activities in the Kitchen. The kitchen was more or less of a gathering place for children and adults while meal preparation and other activities were in progress. For this reason, farm kitchens should be large enough to accommodate more persons than the homemaker engaging in the activity of meal preparation. The extent to which children were present is shown in Table 9.

Table 9. Elementary school age children present in the kitchen during certain activities.

Activities	: Percentage of elementary : school age children	
	: Bluestem	: Wheat
Cooking family meals	63.5	52.5
Washing dishes	63.5	41.5
Cooking company meals	47.8	13.8
Preserving food	47.4	21.7

Since the elementary school age children in the study included an almost equal number of girls and boys, it is probable that nearly all of the elementary school age girls and a few boys were in the kitchen during the cooking of family meals and the washing of dishes. It is known that about one-half of these children helped with dishes. To a lesser extent they also set the table and helped in the preparation of meals. It would seem that almost all the girls in the Bluestem area were also in the kitchen during the cooking of company meals and the preserving of food.

The elementary school age children in the kitchen were engaged in a variety of activities. About one-half of them were helping with the work, indicating that almost all the school age girls in

both areas helped in the kitchen. Other activities included playing at the table, playing on the floor, studying and reading, listening to the radio, and talking (Table 10).

Table 10. Activities of elementary school age children while in the kitchen during certain adult activities.

Activities	: Percentage of elementary school age children	
	: Bluestem	: Wheat
Help	46.5	51.6
Play at table	22.6	11.8
Play on floor	9.6	4.0
Study and read	6.9	4.9
Listen to radio	1.7	4.9
Talk	3.9	1.9
Watch work	--	1.0
Play with other children	--	1.0

Sewing. Sewing was done for the family by the homemaker in most of the families with children of elementary school age, as 88 percent of the homemakers in the Bluestem area and 75 percent in the Wheat area sewed. Although the elementary school girls themselves did not sew as much as their mothers, they did sew in about half of the families in the Bluestem area and a little less than a third in the Wheat area. If the girls sewed, doll clothes, play or school clothes, underwear, or nightwear were the items most commonly made.

The dining room and living room were most commonly used for sewing by families having elementary school age girls who sewed. Because a greater proportion of the bedrooms in the Wheat than in the Bluestem area were heated, this room was used more often for sewing there than in the Bluestem area. It would seem that no

special provision should be made for children to sew as they would use the same provisions as their mothers (Table 11).

Table 11. Sewing and its location by elementary school age girls.

Items	: Percentage of families : in which elementary school : age girls sewed	
	: Bluestem :(62 families)	: Wheat :(19 families)
What was sewed		
Doll clothes	53.2	42.1
Play or school clothes	43.5	42.1
Underwear and nightwear	43.5	15.8
Tea towels and other household linens	8.1	15.8
Coats and suits	6.5	10.5
Aprons	--	15.8
Location		
Dining room	30.5	68.4
Living room	19.4	42.1
Bedroom	9.7	31.6
Kitchen	6.5	10.5
Basement and other	6.5	5.3
Sewing room	3.2	10.5

Play Activities. Elementary school age children engaged in similar types of indoor play activities in both the Bluestem and the Wheat areas. There were some differences between the areas, however, as to the extent of participation in the activities. A greater proportion of the elementary school age children in the Bluestem area played quietly, played make-believe, and played music than did the children in the Wheat area. A greater proportion of the children in the Wheat area played with educational materials and played actively than did the elementary school age children in the Bluestem area, as shown in Table 12.

Table 12. Types of indoor play activities.

Activities	Percentage of elementary school age children	
	Bluestem	Wheat
Play quietly (1)	60.1	53.5
Play with educational material (2)	43.1	64.4
Play make-believe (3)	26.6	12.9
Play with music	21.0	12.9
Play actively (4)	6.1	13.9

- (1) Play quietly: Read, make collections, handwork, cut outs.
- (2) Play with educational material: Color, draw, paint, puzzles, cards, checkers, clay, radio, television.
- (3) Play make-believe: Dress up, play church, farm set, doll house, bake.
- (4) Play actively: Table tennis, truck, train, jeep, boat, marbles, wrestling.

Measurements Required for Play Materials, Furniture,  
and Bedrooms

The number of play materials owned varied greatly among families. A study made of the play materials owned by the elementary school age children indicated that the smallest number of play materials owned by girls was 16 and the greatest number was 241. Likewise, the smallest number owned by boys was 10, and the greatest number was 249. Further examination showed that few items were owned by a majority of the children. The educational type contained more items, both for girls and boys, than any other type. Therefore, a frequency distribution was constructed of the number of play materials the families owned within the educational type. These families were then divided into quartiles, and the number of other play materials they owned in the other types was determined. There being a great difference

between the lowest and the highest quartiles, study was made of these two groups. Even within each quartile there was considerable difference between the number of items possessed in each of the types of play materials. For this reason, to arrive at the amount of play materials for which to plan, a median number of each type was regarded as more representative than a mean.

The median number of items for the various types of play materials by low and high quartiles for girls and boys is presented in Table 13. In the low quartile, it is shown that the girls owned a median number of 32 items, which is more than twice as many as the 15 owned by the boys. In the high quartile, the median number of 76 items owned by the girls is only slightly higher than the 66 owned by the boys.

Table 13. The median number of items by low and high quartiles for various types of play materials.

Type of play material	: Low quartile		: High quartile	
	: Girls	: Boys	: Girls	: Boys
Educational	6	6	38	43
Dolls	11	0	17	4
Games	7	4	12	6
Doll furniture	5	0	5	1
Throwing	2	2	2	5
Mechanical	0	3	1	4
Building and construction	1	0	1	2
Dress up	0	0	0	1
Total number	32	15	76	66

The play materials in the lowest and in the highest quartiles, as possessed by the elementary school age girls and boys in this study of the Wheat area, were used as the basis for planning storage facilities for play materials. Those materials



in the lowest quartiles were designated as a minimum amount while those in the highest quartile were regarded as liberal. The specific play items included in each type were determined by the formula indicated in the Method of Procedure.

Minimum Number of Play Materials. Following is a list of play materials with dimensions, in inches, used in planning storage space. The first dimension indicates height; the second, width; and the third, thickness or depth.

Table 14. Minimum play materials for the girls.

Items	Number	Dimensions
<b>Dolls:</b>		
character	3	6 1/2 x 10 x 9 (each)
small	1	8 x 3 x 3 (standing)
	1	7 x 5 x 4 3/4 (sitting)
large	1	12 x 9 x 11 (sitting)
	1	15 x 10 x 15 (sitting)
paper	4	12 7/8 x 10 1/2 x 1/8 (each)
<b>Doll furniture:</b>		
dishes	2 sets	18 x 5 x 10 (each set)
bed	1	26 x 14 x 14
cooking utensils	1 set	30 x 3 x 10
luggage	1	15 1/2 x 16 1/4 x 5
<b>Throwing:</b>		
baseball	1	4 1/2 diameter
basketball	1	9 1/2 diameter
<b>Educational:</b>		
books	2	8 x 5 1/4 x 1
	2	8 1/4 x 7 1/2 x 1/4
	2	8 x 6 3/4 x 1/4
bulletin board	1	36 x 24 x 1
radio	1	10 1/2 x 6 x 6 1/4
<b>Games:</b>		
puzzles	4 boxes	11 1/4 x 10 x 2 1/8 (each)
cards	3 decks	3 5/8 x 2 5/8 x 5/8 (each)



Table 15. Minimum play materials for the boys.

Items	: Number	: Dimensions
<b>Mechanical:</b>		
train	1	44 x 36 (track oval)
tractor	1	4 1/4 x 2 1/2 x 3 1/4
truck	1	4 3/4 x 2 3/4 x 1 3/4
<b>Throwing:</b>		
baseball	1	4 1/2 diameter
basketball	1	9 1/2 diameter
<b>Educational:</b>		
books	2	8 x 5 1/4 x 1
	2	8 1/4 x 7 1/2 x 1/4
	2	8 x 6 3/4 x 1/4
bulletin board	1	36 x 24 x 1
radio	1	10 1/2 x 6 x 6 1/4
<b>Games:</b>		
puzzles	3 boxes	9 x 6 1/4 x 2 (each)
cards	1 deck	3 5/8 x 2 5/8 x 5/8

Liberal Number of Play Materials. Following is a list of play materials with dimensions, in inches, used in planning storage space. The first dimension indicates height; the second, width; and the third, thickness or depth.

Table 16. Liberal play materials for the girls.

Items	Number	Dimensions
<b>Dolls:</b>		
character	7	6 1/2 x 10 x 9 (each)
small	1	8 x 3 x 3 (standing)
	1	7 x 5 x 4 3/4 (sitting)
	1	8 x 6 x 5 (sitting)
large	1	19 x 9 x 6 3/4 (standing) or
		12 x 9 x 11 (sitting)
	1	15 x 10 x 15 (sitting)
paper	5	12 7/8 x 10 1/2 x 1/8 (each)
<b>Doll furniture:</b>		
dishes	1 set	33 1/2 x 5 x 9 3/4
bed	1	26 x 14 1/2 x 14
cooking utensils	1 set	30 x 3 x 10
house	1	33 1/2 x 12 x 18 3/4
table	1	24 x 18 x 21
chairs	2	12 x 11 x 19 1/4
luggage	1	15 1/2 x 16 1/4 x 5
<b>Mechanical toys:</b>		
tractor	1	10 x 5 1/2 x 5
train	1	32 x 36 (track oval)
<b>Throwing:</b>		
baseball	1	4 1/2 diameter
basketball	1	9 1/2 diameter
<b>Building:</b>		
workbench tools	1 set	24 x 12 x 4
<b>Educational:</b>		
books	11	8 x 5 1/4 x 1
	3	8 x 6 3/4 x 1 1/4
	3	8 1/4 x 7 1/2 x 1 1/4
	3	9 1/2 x 6 x 1 1/4
	3	9 3/4 x 7 1/2 x 1 1/4
	3	10 1/2 x 7 1/2 x 1 1/8
	3	10 1/2 x 8 1/2 x 1 1/4
	3	11 1/4 x 9 x 1 1/4
	3	13 x 9 3/4 x 1 1/4
typewriter	1	11 5/8 x 7 5/8 x 4 3/4
writing desk	1	36 x 19 x 30
desk chair	1	17 x 15 x 33
bulletin board	1	36 x 24 x 1
radio	1	10 1/2 x 6 x 6 1/4
<b>Games:</b>		
puzzles	8 boxes	11 1/4 x 10 x 2 1/8 (each)
cards	4 decks	3 5/8 x 2 5/8 x 5/8 (each)

Table 17. Liberal play materials for the boys.

Items	Number	Dimensions
<b>Dolls:</b>		
character	2	6 1/2 x 10 x 9 (each)
small	1	8 x 3 x 3 (standing)
large	1	15 x 10 x 15 (sitting)
<b>Doll furniture:</b>		
dishes or	1 set	18 x 5 x 9 3/4
cooking utensils	1 set	30 x 3 x 10
<b>Dress up clothes:</b>		
cowboy	1	(on hanger in closet)
<b>Mechanical toys:</b>		
tractor	1	10 x 5 1/2 x 5
train	1	52 x 36 (track oval)
autos	1	9 1/2 x 4 x 2 3/4
	1	8 1/2 x 4 x 2 1/2
<b>Throwing:</b>		
baseball	1	4 1/2 diameter
bat	1	33 x 2 1/2 x 2 1/2
basketball	1	9 1/2 diameter
dart board	1	19 x 19 x 1
darts	4	7 x 2 x 2
archery set	1	46 x 3 3/4 x 1 3/4
<b>Building and construction:</b>		
tinker toys	1 set	10 1/2 x 3 1/2 x 3 1/2
work bench tools	1 set	24 x 12 x 4
<b>Educational:</b>		
books	10	8 x 5 1/4 x 1
	4	13 x 9 3/4 x 1/4
	4	11 1/4 x 9 x 1/4
	4	10 1/2 x 8 1/2 x 1/4
	4	10 1/2 x 7 1/2 x 1 1/8
	4	9 3/4 x 7 1/2 x 1/4
	4	9 1/2 x 6 x 1/4
	4	8 1/4 x 7 1/2 x 1/4
	4	8 x 6 3/4 x 1/4
bulletin board	1	36 x 24 x 1
radio	1	10 1/2 x 6 x 6 1/4
globe	1	16 high, 12 diameter
<b>Games:</b>		
puzzles	4 boxes	11 1/4 x 10 x 2 1/8 (each)
cards	2 decks	3 5/8 x 2 5/8 x 5/8 (each)

The furniture and dimensions usually included in the room of an elementary school age child were:

Single bed	39" x 80"
Chest	28 3/4" x 17 1/2" x 38"
Chair	16" x 16"

Bedroom sizes were chosen from those presented in Contemporary Farmhouses (6). The dimensions were selected on the basis of those representing small, medium, and large size bedrooms.

Small	9' 0" x 10' 0"
Medium	10' 0" x 11' 4"
Large	11' 4" x 17' 0" and 13' 0" x 14' 0"

#### APPLICATION OF FINDINGS TO ROOM DESIGN

Furniture and play equipment arrangements were planned for bedrooms of the various dimensions. In addition to the storage facilities for the play materials, varying in size according to the measurements of the room and the number of toys to be included, other furniture in the child's room consisted of a bed, a chest, and a chair. The chair could be used by an adult attending the child. It was not included in the room of the girls owning a liberal amount of toys since the chair at the desk could be used instead. Plans for location of the bed included placement of only the head against the wall, when possible, so that the bed extended out into the room. In this way, it divided the play area from the sleeping and dressing area. The chest,

for clothes storage, was planned for placement as near to the closet as possible to facilitate dressing procedure.

A study of the composition of the families indicated that there was usually only one elementary school age child in the quartile having a minimum amount of play materials. Therefore, each bedroom for the minimum amount was planned to accommodate only one child. A small size bedroom was found to be sufficient for the storage of all of the play items likely to be used there by either girls or boys.

According to a study of the composition of the families, the girls who had a liberal amount of play materials were likely to have their own bedrooms, or to share one with another school age girl. Therefore, room arrangements were planned both for a school age girl alone, and for two girls together. The probable room arrangement for the school age boy, as indicated by the study, was for him to have a bedroom by himself.

In planning arrangements for the storage of the play materials, use was made of the principles of good storage and the measurements of the child as related in the Review of Literature.

Consideration was given to the use of a storage unit 9 inches deep as recommended by Johnson (7), but the dimensions of the play materials included in this study were such as to make this depth too narrow to be suitable. A 12 inch shelf was usable for most of these play items with the exception of a few of the larger ones which could be stored as suitably elsewhere.

Various open shelf units, as known to be used in modern room designing, were developed. These are presented in Plates I through VIII.

A summary of the dimensions in linear feet is presented in Table 19.

Table 19. Linear feet of storage units for play materials.

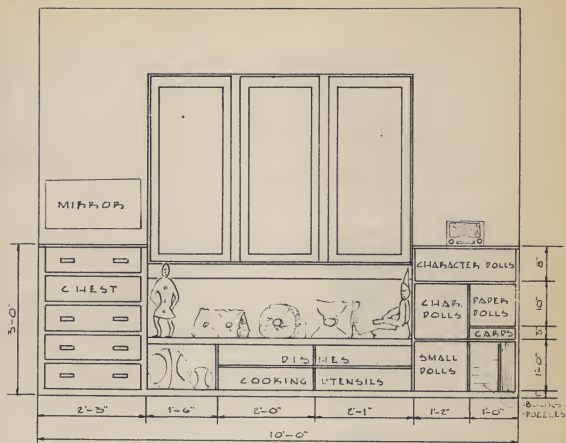
Play materials	: Dimensions in linear feet	
	: Girls	: Boys
Minimum amount		
Small size room	17	5
Liberal amount		
Small size room	19	18 1/2
Medium size room	25 1/3	24 1/2
Large size room	20 2/3	16



## EXPLANATION OF PLATE I

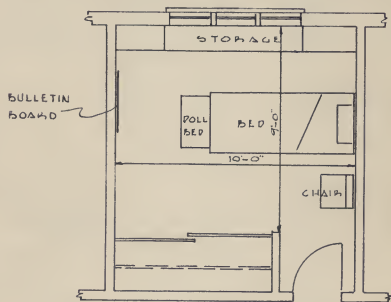
### Small Size Room for Girls having a Minimum Number of Play Materials

Provision was made in this room, 9' 0" x 10' 0", for storing all of the play materials owned by the school age girl. A unit was planned for clothing and toy storage along one wall. It provided sufficient space for most of the toys, with the exception of one or two dolls which were too large for the shelves. These were placed on the built-in window seat. Doll luggage was also too large for storage on the shelves planned and was kept in the bedroom closet.



ELEVATION

SCALE 1/2" = 1'-0"



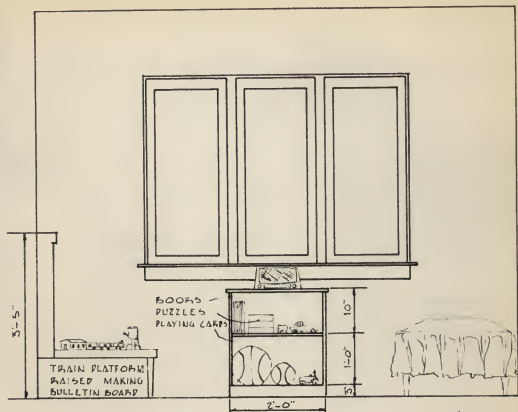
FLOOR PLAN

SCALE 1/4" = 1'-0"

## EXPLANATION OF PLATE II

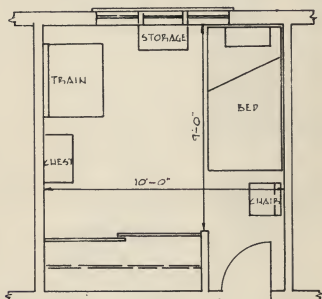
### Small Size Room for Boys having a Minimum Number of Play Materials

This room, 9' 0" x 10' 0", was a suitable size to provide for the storage of all the play materials owned by the school age boy. All of the toys, with the exception of the train, were stored on shelves under the windows. Since suitable storage for the train was provided in this small room, it was necessary to place the bed with the head and long side against walls. The train was enclosed in a wall cabinet, with the track fastened to the inside of the cabinet door. When the door was opened, it became a surface supported by two legs. Thus the train track was ready for immediate use. When the door was closed the outside was used for the bulletin board.



ELEVATION

SCALE  $1/2" = 1'-0"$



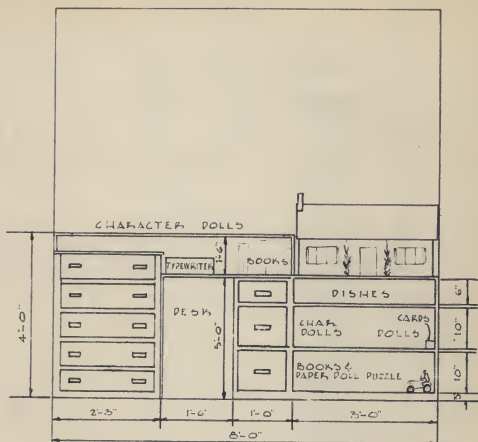
FLOOR PLAN

SCALE  $1/4" = 1'-0"$

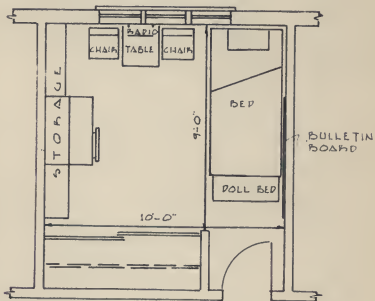
### EXPLANATION OF PLATE III

#### Small Size Room for Girls having a Liberal Amount of Play Materials

This room, which measures 9' 0" x 10' 0", was too small for the storage of all of the liberal amount of play materials owned by the girls. It was planned for only one school age girl, but if two girls were to occupy it, bunk beds could be provided. An adult attending the girl could make use of the chair that ordinarily belongs at the desk. In addition to the storage on the shelves planned, the play materials were also placed elsewhere in the bedroom, and in other rooms of the house. The typewriter and some of the books were placed on the desk, while the radio was on the small table by the window. The two large dolls could be kept on the bed, the doll bed, or the chairs. Plans included placement of the doll luggage in the bedroom closet, and the basketball and baseball either in the closet or else near the back door or in the basement. The electric train and the work bench tools were planned for the basement where there would be ample room for their storage and use. Storage could be provided in the kitchen for the cooking utensils where the young school age girl could imitate, under supervision, the activities of her mother. Half of the playing cards and puzzles were planned for storage in the living room where they could be used when the girl was spending leisure time with the family.



ELEVATION SCALE 1/2" = 1'-0"



FLOOR PLAN SCALE 1/4" = 1'-0"

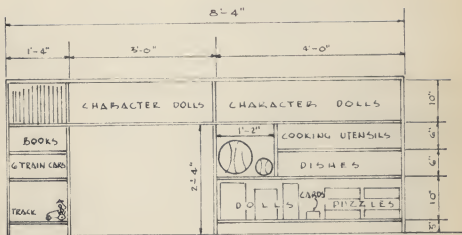


#### EXPLANATION OF PLATE IV

##### Medium Size Room for Girls having a Liberal Amount of Play Materials

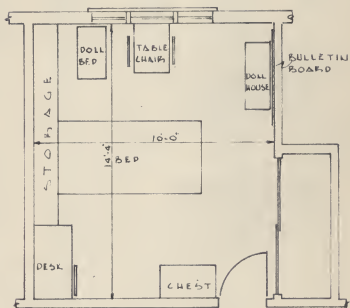
This room, 10' 0" x 11' 4", was not large enough to provide storage for all of the play materials of the girls having a liberal amount of play materials. The bed was placed to divide the room into two separate areas, with the play area on one side, and the dressing and study area on the other. If necessary, provision for two school age girls to share this room could be made by the use of bunk beds. There were several possible arrangements for the placement of the two dolls which were too large for the storage shelves. They could be placed on the bed, the doll bed, or the chairs at the small table. Storage of the luggage was planned for the bedroom closet.

It was not possible to include space for setting up the train, thus plans were made only for storing the cars and sections of track in the bedroom. For use, the train should be taken to a less crowded room of the house. The work bench tools were to be kept in the basement, where there would be sufficient space for their use as well as storage.



E L E V A T I O N

SCALE 1/2" = 1'-0"



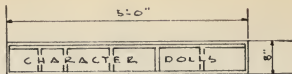
F L O O R P L A N

SCALE 1/8" = 1'-0"

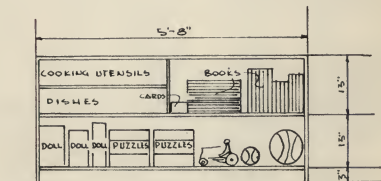
## EXPLANATION OF PLATE V

### Large Size Room for Girls having a Liberal Amount of Play Materials

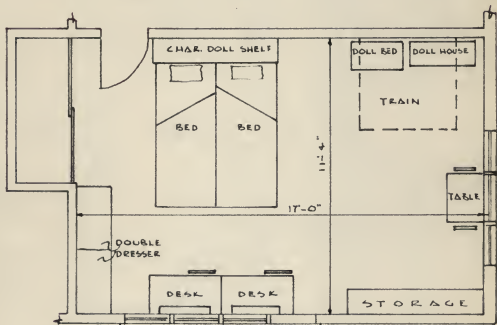
In this room, 11' 4" x 17' 0", space was provided for the storage of all of the play materials owned by the girls having a liberal amount. Provision was made for two school age girls to use the bedroom, but the room could also be adapted for the use of one girl, resulting in a more spacious arrangement. One part of the room was planned as a play area. Besides the storage unit for play materials, the area also included a train enclosed in a wall cabinet, with the track fastened to the inside of the cabinet door. The door could be opened to become a surface supported by two legs, making the track ready for use. When the door was closed, the outside was used for the bulletin board, and there was sufficient clearance under the cabinet for storage of the doll bed and doll house. The dolls which were too large for sitting on the storage shelves could be kept on the beds, the doll bed, or at the table and chairs. The luggage was planned for the bedroom closet, while a place in the basement could be provided for the work bench tools.



SEVEN CHARACTER DOLLS OVER BED SCALE  $1/2" = 1'-0"$



ELEVATION OF STORAGE SCALE  $1/2" = 1'-0"$



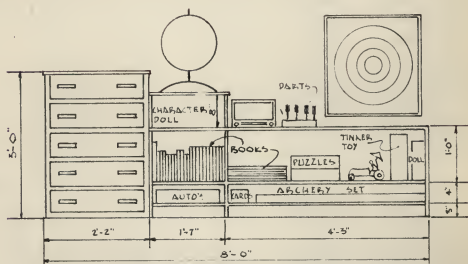
FLOOR PLAN SCALE  $1/4" = 1'-0"$

## EXPLANATION OF PLATE VI

### Small Size Room for Boys having a Liberal Amount of Play Materials

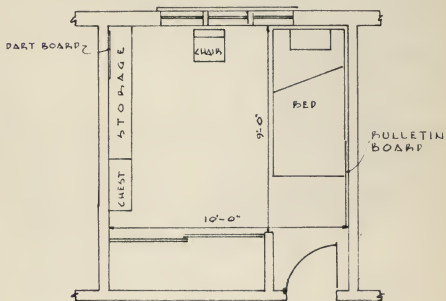
This room, 9' 0" x 10' 0", was inadequate to provide for the storage of all the play materials of the school age boys who owned a liberal number. To plan for the greatest amount of storage space and free play area, it was necessary to place the bed with the head and long side against walls. Some of the play materials were stored on open shelves. The doll, too large for sitting on a shelf, was kept on the bed or chair, while the cowboy costume was hung up in the bedroom closet.

Space other than in the bedroom was required for many of the items. The basement was considered a suitable place for the electric train and the work bench tools, since there would be sufficient space for their use. The basketball, baseball, and baseball bat could also be stored in the basement. Other possibilities for the storage of this sports equipment were in the bedroom closet, or some place near the outside door. Convenience, and perhaps season of the year, would be factors affecting this choice. The cooking utensils or doll dishes were suitable for storage in the kitchen where a young school age child might observe and imitate, under supervision, his mother's activities.



ELEVATION

SCALE 1/2" = 1'-0"



FLOOR PLAN

SCALE 1/4" = 1'-0"



## EXPLANATION OF PLATE VII

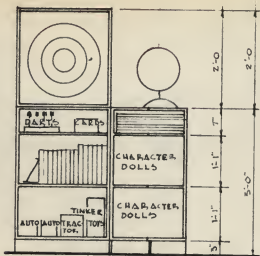
### Medium Size Room for Boys having a Liberal Amount of Play Materials

This room, 10' 0" x 11' 4", provided satisfactorily for the storage of the play materials of the boys owning a liberal amount.

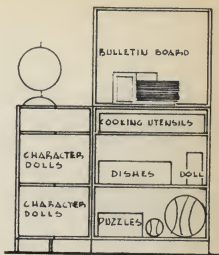
This was in contrast with the storage plans for the liberal amount owned by the girls where this medium size room did not provide sufficient space for all of the play materials. The addition of many large items owned by the girls such as a table and chairs, doll bed, and doll house, resulted in diminished space for storage facilities and play in the bedroom.

In the boys' room placement of the bed with the head and long side against walls allowed sufficient room for playing with the electric train. Storage for the cars of the train was provided in a cabinet that was fastened to the wall. The door of the cabinet could be let down to form a large table, with a track on it. When the door of the cabinet was fastened in place, a chair could be kept in front of it. This chair was provided especially for an adult attending the child. The cowboy costume was kept in the bedroom closet.

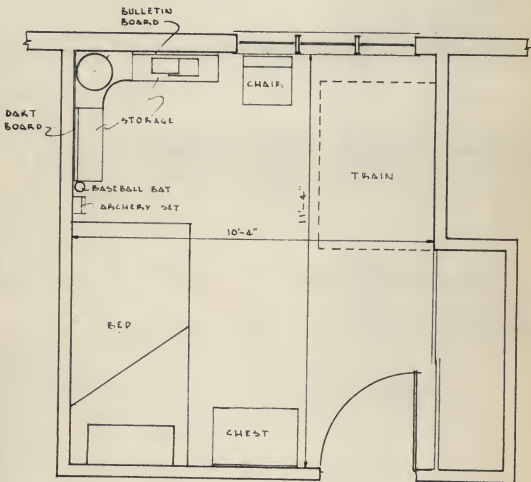
The only item not included in the bedroom was the work bench tools, which were considered suitable for storage in the basement.



ELEVATION



SCALE 1/2" = 1'-0"



FLOOR PLAN

SCALE 3/8" = 1'-0"

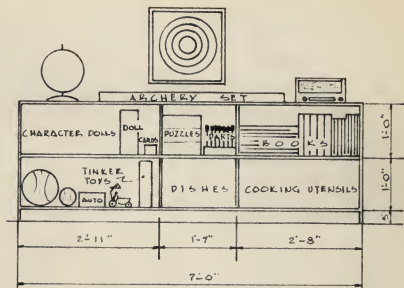
## EXPLANATION OF PLATE VIII

### Large Size Room for Boys having a Liberal Amount of Play Materials

This 13' 0" x 14' 0" bedroom provided sufficient space for the storage of all of the play materials owned by the boys having a liberal amount.

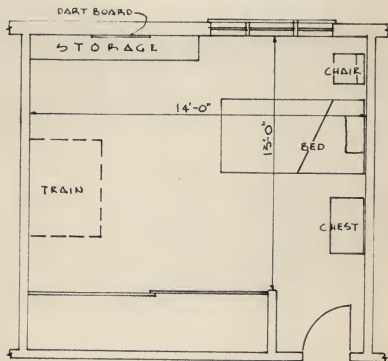
The placement of the bed, with only the head against the wall, divided the play area from the sleeping and dressing area. This was a more spacious arrangement than the one in the medium size room, although storage also was provided in the medium size room for all of the play materials of the boys owning a liberal amount. A chair was planned for use by an adult attending the child.

In addition to the storage unit for play materials, the room also included an electric train enclosed in a wall cabinet, with the track fastened to the inside of the cabinet door. The door, when opened, was a surface supported by two legs, making the track ready for use. The outside of the door when closed could be used for the bulletin board. The baseball bat was placed next to the storage unit, the large doll was placed on the bed, and the cowboy suit hung in the closet. Work bench tools were considered suitable for storage in the basement.



ELEVATION

SCALE  $1/2" = 1'-0"$



FLOOR PLAN

SCALE  $1/4" = 1'-0"$

## SUMMARY

In this study, attention was focused on the common leisure activities of elementary school age Kansas farm children and their requirements for space in the home.

This study showed that the housing in the Wheat area was superior to that of the Bluestem area. Their houses were in a more favorable location to community facilities, were larger and less crowded with rooms more likely to be heated, and to contain more of the comfort features.

The elementary school age children in both areas engaged in similar types of indoor play activities, but to a different extent. A greater proportion of the children in the Bluestem area played quietly, played make-believe, and played music than did the children in the Wheat area. A greater proportion of the children in the Wheat area played with educational materials and played actively than did the elementary school age children in the Bluestem area.

In planning storage for the play materials of the children in the Wheat area, a small size room, 9 feet by 10 feet, proved sufficient for the minimum amount for both girls and boys, but was insufficient for the liberal amount. A medium size room, 10 feet by 11 feet 4 inches, was sufficient for boys with a liberal amount of play materials, but insufficient for girls. This was due to the type of materials owned rather than the number. Large size rooms, 11 feet 4 inches by 17 feet and 13 feet by 14 feet, were suitable for both girls and boys with liberal

amounts of play materials.

The play materials were such as to make open-shelf units 12 inches deep suitable for storing most of the items. Findings in this study were similar to previous findings of research concerning storage for preschool children which recommended a minimum of 10 linear feet and a maximum of 30 linear feet of shelving. In this study, 5 linear feet for the boys and 17 feet for the girls was found sufficient for the minimum amount of play materials, while 24 1/2 linear feet for the boys and 25 1/3 feet for the girls was found suitable for the maximum amount.

The indoor play activities of the elementary school age child in the Bluestem area being similar to those in the Wheat area, the storage arrangements suggested in this study might be applicable for both areas.

This study might be strengthened by the actual storage of the play materials in mock units, to be tested by elementary school age children.





## ACKNOWLEDGMENT

Deepest gratitude is expressed to Miss Tessie Agan, Associate Professor of Family Economics and major instructor, for her guidance, encouragement, valuable suggestions, and criticisms during the development of this study.

## LITERATURE CITED

- (1) Agan, Tessie.  
The House; Its Plan and Use. Chicago: J. B. Lippincott Company, 1948. 706 p.
- (2) Almy, Millie.  
Child Development. New York: Henry Holt and Company, 1955. 490 p.
- (3) Breckenridge, Marian E., and E. Lee Vincent.  
Child Development: Physical and Psychologic Growth Through the School Years. Philadelphia: W. B. Saunders Company, 1955. 497 p.
- (4) Gesell, Arnold, and Frances L. Ilg.  
The Child from Five to Ten. New York: Harper and Brothers Publishers, 1946. 475 p.
- (5) Grady, Ethyl R., Grace H. Smith, and Blanche M. Kuschke.  
Rhode Island Rural Housing and Family Leisure. Rhode Island Agricultural Experiment Station Bulletin 315. Apr., 1953.
- (6) Hodgell, M. R.  
Contemporary Farmhouses, Flexiplan 71204. Technical Committee of the North Central Region. Urbana: University of Illinois Press, 1956.
- (7) Johnson, B. Eleanor.  
Indoor Play Areas for the Preschool Child. Arizona Agricultural Experiment Station Technical Bulletin 126. Mar., 1952.
- (8) Martin, W. Edgar.  
Children's Body Measurements for Planning and Equipping Schools. U. S. Department of Health, Education, and Welfare. Washington: Government Printing Office, 1955.
- (9) McCullough, Helen E.  
Space Design for Household Storage. Illinois Agricultural Experiment Station Bulletin 557. Aug., 1952.
- (10) Millard, Cecil V.  
Child Growth and Development in the Elementary School Years. Boston: D. C. Heath and Company, 1951. 511 p.
- (11) Monroe, Merna M.  
Toy Storages for the Home. Maine Agricultural Experiment Station Bulletin. Oct., 1955.

- (12) Nolan, Francena L., and M. E. John.  
Use of Rooms in Farm Houses by 53 Pennsylvania Families. Pennsylvania Agricultural Experiment Station Bulletin 566. Apr., 1953.
- (13) Thorpe, Alice C., and Irma H. Gross.  
Family Use of Farm Homes: A Study of Activities Carried on by and Preference of Family Members. Michigan Agricultural Experiment Station Technical Bulletin 227. Apr., 1952.
- (14) Trotter, Virginia Yapp.  
Space and Equipment Requirements for the Preschool Child's Room in a Professional Family Home. Unpublished master's thesis, Kansas State College. 1948.
- (15) U. S. Department of Health, Education, and Welfare.  
Your Child from 6 to 12. Children's Bureau Publication Number 324. Washington: Government Printing Office, 1949.
- (16) Woolrich, Avis M., and Jack D. Herrington.  
Storage Units for Household Linens. United States Department of Agriculture, Agriculture Information Bulletin No. 150. Washington: Government Printing Office, Mar., 1956.
- (17) Woolrich, Avis M., Mary M. White, and Margaret A. Richards.  
Storage Space Requirements for Household Textiles. United States Department of Agriculture ARS 62-2. Washington: Government Printing Office, Sept., 1955.

COMMON LEISURE ACTIVITIES OF ELEMENTARY SCHOOL AGE  
KANSAS FARM CHILDREN AND THEIR REQUIREMENTS  
FOR SPACE IN THE HOME

by

ANN MARIE SULLIVAN

B. S., Hunter College  
of the City of New York, 1955

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AN ABSTRACT OF A THESIS

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Department of Family Economics

KANSAS STATE COLLEGE  
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1956

This study concerned provisions for the leisure activities of the elementary school age child in the Kansas farm home. Specifically, the objectives were:

1. To determine what the common leisure activities of the elementary school age child tend to be in the farm home.

2. To determine the space and location of furniture and play materials required for leisure activities.

3. To suggest room designs and arrangements for selected combinations of leisure activities as suggested by the play materials owned.

Data for the first objective of the study constituted a special and otherwise unexplored phase of Kansas Agricultural Experiment Station Project No. 288, "Housing Requirements of Kansas Farm Families with Children." Selected for study were those farm families with children between the ages of 6 and 12, residing in the Bluestem and the Wheat growing areas of Kansas. The data pertained to the farm dwelling as it affected the leisure activities of the elementary school age child. It concerned not only the usual leisure activities but also other activities in which the child engaged when not occupied with the functions of daily living or not in school. For the Wheat area only, the kinds and numbers of play materials owned were studied. Dimensions were determined for bedrooms of small, medium, and large sizes, for the furniture commonly found in the elementary school age child's room, and for minimum and liberal amounts of play materials. Diagrammatic scale drawings were used in planning room arrangements, placement of the furniture, and storage for the

play materials.

The elementary school age children in both areas engaged in similar types of indoor play activities, but to a different extent. A greater proportion in the Bluestem area played quietly, played make-believe, and played music than did those in the Wheat area. A greater proportion in the Wheat area than in the Bluestem area played with educational materials and played actively.

In planning storage for the play materials of the children in the Wheat area, a small sized bedroom, 9 feet by 10 feet, proved sufficient for the minimum amount of play materials. A medium sized bedroom, 10 feet by 11 feet 4 inches, was sufficient for boys with a liberal amount of play materials, but insufficient for the girls. This was attributed to the type of materials owned rather than the number. Large sized bedrooms, 11 feet 4 inches by 17 feet and 13 feet by 14 feet, were suitable for both girls and boys with liberal amounts of play materials.

The play materials were of such a size as to make open-shelf units 12 inches deep suitable for storing most of the items. Five linear feet for the boys and 17 feet for the girls were sufficient for the minimum amount of play materials, whereas 24 feet 6 inches for the boys and 25 feet 4 inches for the girls were required for the liberal amount.

This study showed that the housing in the Wheat area was superior to that of the Bluestem area. Their houses were in a more favorable location to community facilities, were larger and less crowded, with rooms more likely to be heated, and to contain



more of the comfort features. Nevertheless, the indoor play activities of the elementary school age child in the Bluestem area were similar to those in the Wheat area, and thus the storage arrangements suggested in this study might be applicable for both areas.

