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This study involves the presentation of a plan for the construction and arrangement of a combination homemaking room within an allotted space for the seventh and eighth grade girls of the Walter Colton School, Monterey, California.

As a first step in this study, a short survey was made to ascertain the homemaking needs of the girls. Included in this survey are the occupation of parents, economic status, size of family, and home duties of the girls. A course was planned to give practical instruction in the essentials of food, clothing, laundering, and home management so that they might become familiar with everyday household tasks. The home economics program set up in this community aims to help these girls to find satisfaction in the everyday relationships of life, as many come from homes of limited economic and cultural background.

In considering the methods of teaching to be used in the new homemaking room, a plan of organization in which the pupils rotate from one activity to another, with various activities carried on simultaneously, was chosen. For this type of organization, a combination room was planned, as it provides a homelike environment and at the same time is economical.

In planning, the activities of the past year were listed as a basis for allotment of unit space for the various activities. Desirable characteristics of each unit were considered in assigning the units to a location. Standards of space allowances and working heights as recommended by Doris Anderson in her thesis "Dimension Standards for a High School Foods Laboratory", Maud Wilson "Standards for Working Surface Heights and Other Space Units for the Dwelling"

were used throughout and modified when necessary to fit the particular need of the situation. Other standards were determined by experimentation. The choice of small equipment was based on frequency of use and storage for such equipment was planned within each specific area.

The final plan includes four main areas:

(1) The foods area consists of three unit kitchens 7'0" x 9'0", each providing work space and equipment for four girls. Provision for meal service is made by placing small tables and chairs in the area adjoining the unit kitchens. A fourth unit kitchen is planned for demonstration and larger quantity cookery. Additional storage for food preparation and meal service is provided in tall cabinets for extra cooking utensils, dishes and glassware for guest meals, staple food supplies, and aprons.

(2) A laundry area provides space for three work centers, a washing, an ironing, and an auxiliary work center. Provision is made in this area for the storage of equipment pertaining to flower arrangements and for a cleaning closet.

(3) A clothing area provides space for three sewing tables and five machines sufficient for sewing activities. Eighty tote trays and other sewing equipment are stored nearby. Because of the table space, this area is also to be used for study and discussion.

(4) A living room. The living room will be used for social activities and for group discussions.

Additional storage facilities provide space for equipment pertaining to units of work on care of own room, child care and home nursing.

PLANNING A COMBINATION HOMEMAKING ROOM FOR A MONTEREY, CALIFORNIA, SCHOOL

by

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CHAPTER I

THE PROBLEM AND ITS SETTING

A survey in 1935 of the public schools of Monterey indicated a need for a definite building program to provide for additional buildings and to include the remodeling of existing buildings in order to meet present educational practices. Because home economics has developed rapidly since the present rooms were established, the need for modernized facilities for this subject became an essential item in the program.

The planning of a homemaking room has become more complicated as the scope of the curriculum has increased. Until recently, home economics was restricted mainly to cooking and sewing, but today instruction in this department includes a wide range of activities related to home and family life—the responsibilities of the family members to themselves and to each other, health and nutrition, social problems, child care and training, selection and care of clothing, as well as the essential skills. These cooperate in the single purpose of helping to improve the individual's understanding of family life, increasing his

knowledge and helping him find happiness and satisfaction in the everyday relationships of life.

This change in the objective of homemaking instruction as seen in the change of curriculum is expressed by Williamson and Lyle, who state that:

> The concept embodied in home economics is thus seen to have evolved from the so called practical arts of cooking, sewing and housekeeping to the broad study of family life emphasizing human relationships as well as homemaking skills. (7:33)

Ivol Spafford explains the effect of current influences upon the program by saying:

> The increasing interrelatedness and interdependence of people have extended still further the interest of home economics in the social, political and economic conditions affecting immediate personal living, home and family life. (7:48)

To meet the needs of this newer program and at the same time consider the specific requirements of the locality, a careful evaluation of those factors which combine in producing a desirable arrangement of the physical facilities of the homemaking department must be made.

The purpose of this study is to show the development of a plan for a homemaking room designed to meet the specific homemaking needs of the Walter Colton School of

Monterey, California. To have a better understanding of this particular situation it was necessary to study the home background of the girls as a basis for the program outlined to satisfy their requirements. After due consideration of these two major factors, it was then possible to plan teaching facilities appropriate to the needs of the students.

Review of Literature

At the present time there is only a limited amount of material on the planning and equipping of homemaking laboratories. The first important study was that of Melvin Brodshaug's Buildings and Equipment for Home Economics in 1932. At that time he found the following practices to be in general use:

(1) It is a general practice to provide foods and clothing laboratories, though there are home economics departments which have neither.

(2) Special rooms such as demonstration rooms, home nursing rooms, and laundries were found in only a few schools.

(3) Some apartment area was found in nearly all the selected schools while a few depended on apartment space exclusively for all home economics activities. Dining rooms and bedrooms were the apartment rooms most frequently provided.

(4) Storage area was provided in most schools and averaged one hundred forty-five square feet for the ninety-seven schools. Several schools also had fitting rooms, departmental offices, and hallway space.

(5) Pupil-station utilization of the entire home economics department averaged approximately 50% for junior high schools and 35% for senior high schools. (2:55)

Brodshaug observed that most of the early departments were placed in basements. Until quite recently, architects have continued to place home economics departments in basements for no explainable reason other than precedent. As the scope of the curriculum has become wider, the teaching facilities in modern buildings have been adapted to meet these current demands, and home economics departments have moved upstairs.

The most helpful reference on equipment has been the Vocational Education Bulletin No. 181, "Space and Equipment for Homemaking Instruction." This bulletin covers all aspects of planning for a homemaking department. It is referred to frequently throughout this study.

Related Studies

Four studies have been completed at Oregon State College which deal with some phase of equipment for the foods and clothing laboratories of homemaking departments. Because of their importance in connection with the present study, they are abstracted here.

Opinions of Leading Home Economics Educators Regarding the Planning of Homemaking Rooms, by Justine O'reilley

This study of the opinions of one hundred and thirty-one leading authorities in home economics has been helpful in this report in that it deals fully with their judgment concerning the location and arrangement for the department and presents opinions relative to arrangements for teaching foods and serving meals, and common practices in the teaching of foods.

The judgment of these women indicated that it is not possible to make a definite ruling as to the choice of any one type of room for all situations. However, the largest percentage favored the combination room providing rotation of activities. These leaders contend that the combination room is more efficient for teaching by the problem method of instruction, creates a more normal home situation, and is economical in administration. On the other hand, those opposing the plan regard it as difficult to supervise, limited to teachers of good organizing ability, and confusing for students.

The greatest factor influencing the arrangement of the foods laboratory is the philosophy underlying the teaching of this subject. If the purpose is to develop skills, a one-room laboratory is preferred. However, if

the foods work is only a part of the entire program of developing broader and happier personalities, various combinations of working areas are used.

In general, since the emphasis is being placed on home kitchens, the unit kitchen is favored as a good type of work center for food preparation. The pattern or the arrangement of the sink, stove, work surface, and table within a unit is dependent upon such factors as the physical features of the room, the shape of the room, and the type of program. An arrangement which allows the teacher a clear view of the students is desirable. Patterns of unit kitchens that are prevalent in many foods laboratories may be classified as U-shaped, L-shaped, parallel, and wall units. There are advantages and disadvantages of each type of arrangement, but from the evidence obtained by this study it is desirable to have counter space on either side of the sink.

In the judgment of the majority of these leading homemaking educators, a group of four in each work center is given preference as the most effective working group from the standpoint of use of equipment, space, and naturalness of the situation.

These educators were almost unanimous in their approval of small tables near each unit kitchen or unit desk for serving food. These give an opportunity to

practice social customs in an everyday family situation. This arrangement of providing small serving tables near each unit is also economical in the use of time, space, and energy. Sufficient linen, silver, china, and glassware for four should be provided and conveniently stored. Adjoining rooms for serving centers are desirable when such facilities are possible.

In the planning and equipping of a homemaking room, these educators agree that such factors as the economic level and background of pupils, the school, the course of study, and the physical facilities available must be taken into consideration.

Dimension Standards for a High School Foods Laboratory by Doris Anderson

This study presents dimension standards necessary in the planning of a high school foods laboratory. It is based upon the measurement of one hundred eighty-seven girls from the ninth and twelfth grades of Corvallis schools. Physical measurements obtained in this study included those in standing and sitting positions. From the results of these measurements and judgments two certain dimension standards: heights for working surfaces, stoves, tables, chairs, shelves, and drawers; and space

for passageways were set up which satisfy the requirements of adolescent girls working in a high school foods laboratory.

Determining a Standard Set of Utensils for a High School Homemaking Laboratory by Ardythe Wilson Dougherty

In this study, fundamental material was secured as a basis for the selection of a set of kitchen utensils for teaching foods. The data were obtained from a selected group of experienced teachers, from recent literature, and from laboratory tests.

Heights for High School Clothing Laboratory Tables Based on Measurements of One Hundred Girls by Mary Elizabeth Stayton

This was a study to determine scientifically standards of heights for high school clothing laboratories. One hundred ninth to twelfth grade girls of Sebastopol, California, ranging in age from 14 to 21 years, were measured. The table heights used included those chosen by the girls for the major sewing activities.

In conclusion it may be stated that the recommendations made in these four studies may be applied practically to the home economics department in any setting provided that adaptation is made to fit the specific circumstances.

Summary

The purpose of this study was to plan a combination homemaking room for the Walter Colton School of Monterey, California. In view of the fact that the philosophy of home making education has undergone considerable change during the past few years, reference has been made to the most recent studies dealing with opinions and practices of experienced educators. Details pertaining to the planning and equipping of similar departments have been used as a basis for the building now under construction in Monterey.

CHAPTER II

THE ELEMENTARY SCHOOL SYSTEM OF MONTEREY

Community Background

Monterey is the chief city of the Monterey Peninsula, aptly called "The Circle of Enchantment." The city lies 125 miles south of San Francisco on the shores of the magnificent Monterey Bay. It is rich in historic lore and tradition, and many fine old buildings have been faithfully preserved. The natural beauty and climate contribute recreational opportunities to the community and there is an ever fluctuating tourist group.

Aside from recreation, which amounts to an industry in this region, commercial fishing is the mainstay of the town. The sardine industry represents a $3,000,000 concern consisting of ten canneries and two reduction plants. In 1941, 261,318 tons of fish were landed, causing a pay roll of $7,000,000 which was paid to 2600 cannery workers and 800 fisherman.[1]

Monterey's population according to the last census is just over 11,000 and that of the township is estimated at 20,600. It is a cosmopolitan population, and many nations are represented. A large percentage are second

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[1]Material obtained from Chamber of Commerce, Monterey, California.

generation Italians. Other substantial leading groups of foreign extraction are Chinese, Mexicans, Spaniards, and Japanese. The present evacuation regulations have temporarily eliminated the latter from this community. This loss, however, is more than counteracted by the increase in numbers brought about by the establishment of an army post.

That the community has a definite effect upon the school program is expressed by the leaders in the Monterey school system in the following statements:

Miss Eleanore Ziel, principal of the Oak Grove School says:

> Monterey has a distinctive personality the factors of which have a peculiar effect on the school program.

Miss Eva Reicks, supervisor, says:

> Such a diversified school population inevitably presents problems of administration and teaching.

Specific problems found in the schools as influenced by the community are discussed in the following paragraphs.[1]

Nationalities in the Schools

On the basis of the language spoken in the home, a survey was made to check the nationalities represented in the school. Table 1 shows the foreign groups found in the Monterey City Elementary Schools.

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[1]Based on surveys which are on file at the office of Monterey City School Superintendent, Monterey, California.

Table 1

Nationalities in Monterey City Schools

Nationality	Number	Per Cent
American born	1015	40.6
Italian	712	28.5
Spanish	275	12.0
Japanese	186	7.4
Mexican	123	5.0
Chinese	62	2.5
Portugese	43	1.5
Slavs	33	1.3
Negro	17	0.5
Hawaiians	10	0.4
Greek	6	0.2
Total	2482	100.0

By American is meant the native-born children of native-born parents. According to this criterion less than half the pupils checked are Americans. The Italians rank second with an enrollment representing more than 25 per cent.

Homes in Which a Foreign Language is Spoken

As many of these children are of foreign extraction, a survey was made of those enrolled in the first grade to determine if there was a language problem. The results are shown in the following table:

Table 2

Language Spoken in the Homes of First Grade Children

Language	Number	Per Cent
English	226	70.8
Italian	51	15.9
Mexican and Spanish	26	8.0
Japanese	7	2.2
Other	10	3.1
Total	322	100.0

The results of this survey showed that more than 28 per cent of these children come from homes where a foreign language is spoken all the time.

Reading Achievement

A further factor to be considered in Monterey is the fact that large numbers of the school population come from homes where there are few or no cultural opportunities. This influences the school program considerably; for example, the problem of reading is a serious one. The analysis of the reading results in grades four to eight using the Green-Nor Self-Diagnostic Reading Test indicates that from the sixth grade to the eighth, the ability to

read is one and one-half years below the standards for comparable grades elsewhere. Numbers of children are found in the sixth, seventh, and eighth grades who are retarded two or more years in reading.

Intelligence

As measured by the Terman Group Test, the general level of intelligence of a high percentage of children is below average. Though there are a few children of superior intelligence, the children who test in the low-average, borderline and dull normal group constitute the majority, and a few of the children are on the moron level. The language handicap undoubtedly has something to do with these results, which were obtained from a test based on reading ability.

Attendance and Transfers

The problem of transfers is one which no school system can ignore. Monterey has special problems in this respect because of the seasonal employment and the mobile nature of the army personnel. Numbers of these families come from other states and are not familiar with the California school system, which varies widely within itself. The most recent report on transfers shows that 627 children were transferred during one year, out of the total enrollment of 1632.

The Philosophy of Education Underlying Present School System[1]

Education in America must be education for living in democracy, for democracy is our chosen way of life. The schools must be untiring in their effort to build a society based on the ideals which can be realized only through a democratic society. The philosophy underlying the present educational program emphasizes the participation of the individual in society rather than in specialized functions imposed on the individual as a preparation for future living. The curriculum is based on experiences of the child instead of subject matter. The aim of the curriculum is to provide for a flow of experiences throughout the school life of a child that will possess maximum breadth and depth of meaning and significance. The pupil's interest is the determinant at the different levels and subject matter is used to enrich the experiences of the children. Emphasis is placed upon the wholeness and integrity of the individual and society and the interaction between the two. Integration is fundamental, and materials and experiences have been combined into situations such as occur at various grade

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[1]Based on work of the Social Studies Curriculum Committee, Monterey City Schools, September, 1939.

levels. At no point are all children at a particular age level required or expected to fulfill common requirements. Through standard tests and study of the individual child's reaction an estimate of his level of achievement is obtained. With this as a basis the individual learning of the child is guided and directed with the aim of developing him personally and socially into an intelligent member of society.

Guidance Program

In line with the psychological thought underlying the problem of instruction is the guidance program that has been developing over a period of four years. Organized primarily for the purpose of the consideration of outstanding maladjusted cases in the classroom, the mental hygiene point of view has gained considerable impetus since the inception of the program.

Insofar as possible the home is enlisted on a cooperative basis for assistance in solving the problem.

Health Program

Because so large a portion of the pupil population is found in the lower economic brackets, the health program has a prominent place in the administration of the

schools. Through the able leadership of the county physician, the County Health Department has recognized the relationship between community health and school health. A contract with the County Health Department now provides the part-time services of three public health nurses in addition to the other services made available through the county hospital. The program of health education which has been made a part of every classroom teacher's work, the development of an adequate system of records accompanied by a systematic check-up in the homes, and the development of a cooperative health program with the county hospital have given the Monterey schools a sound health program.

The Intermediate School

As it is for this school that the new building is planned, special consideration is essential in order to understand thoroughly the problem involved.

In 1940, a transition from an eighth grade program in each building to a six-two program was inaugurated. As a result the pupils of the seventh and eighth grade classes of the six elementary schools are centralized at the Walter Colton School.

This building was an established grade school and is still housing the first six grades in addition to the intermediate (seventh and eighth) grades. To accommodate the additional seventh and eighth grade students from the surrounding schools, 150 children of the lower grades were transferred to a new building, and ultimately the remaining children of this level will be housed in a building to be erected in the near future, thus leaving Walter Colton as the intermediate school.

This change was made because it was believed that children in the seventh and eighth grades profit educationally and socially by a program especially adapted to the needs of early adolescence. At the same time it was evident that economy of administration would be achieved through the sharing of such equipment as is commonly used in shops and homemaking departments.

At the present time the pupils of the seventh and eighth grades, numbering approximately three hundred, are assigned to nine home rooms according to their ability and social adjustment.

The curriculum includes social studies, language arts, science, mathematics, library, music, art, physical education, home arts and shop, all of which are required subjects. Electives are offered in short courses of ten

weeks' duration as exploratory measures. These include dramatics, journalism, boys' cooking, girls' craft, art, glee club and orchestra.

The building program for the Walter Colton School is somewhat complicated because of the transition now taking place in an effort to provide junior high school facilities in a building not well planned for this purpose. The hillside site has limited the play area and is responsible for the construction of new units in the interior court. This court was not used for the purpose originally planned, and its use for school purposes will provide a more compact building and reduce problems of circulation of children. The library and homemaking units will be built here.

The space allotted by the school authorities for the new homemaking department was 64'0" x 28'0" with an alcove 14'0" x 14'0".

Summary

The conduct of the Monterey school system is based upon the underlying philosophy that every child must be provided with situations and experiences essential for full natural development within the scope of his ability. The program outlined to fulfill these requirements has been established and adapted to the conditions in the community.

CHAPTER III

HOME ARTS IN THE INTERMEDIATE SCHOOL OF MONTEREY

Home arts is taught as a required specific unit for girls in the seventh and eighth grades. It is believed, however, that home arts has a definite contribution to the general school program. In training of the girls to become good citizens there are many ways in which home-making activities lend themselves to this general program. The following are typical desirable attitudes with which it is hoped that the girls will perform activities.

(1) Every girl accepts certain duties as her responsibility and takes pride in fulfilling the work entailed by these.

(2) She learns to cooperate and develop sportsmanship by sharing equipment and working with others in a group.

(3) She realizes the desirability of good health and appreciates the necessity of making the most of her ability.

(4) She has the opportunity to practice social conventions--she learns to be polite and courteous and to respect the rights of others.

A further value of the home arts program lies in its collaboration with other subjects of the school course.

Whenever possible, the connection between science, social studies, and home economics is emphasized.

The home arts department has also accepted its responsibility for encouraging effective community and school relationships. In this respect the girls assist with many Parent Teachers Association functions, contribute to Red Cross supplies, and in other ways take an active part in the work of the community.

Survey of Girls in the Intermediate School April 1942

In order to secure data concerning the 150 girls in the seventh and eighth grades of the Walter Colton School, a short survey was made in April, 1942. A copy of the form may be found in the Appendix, page i.

Age-Grade Distribution of Girls

A tabulation of the age-grade distribution of 150 girls taking home arts for the full year is shown in Table 3. The age recorded in this study was taken at the beginning of the term. If a girl enters school at the age of six, as is usual, she would be 12 years old on entering the seventh grade.

Table 3

Age-Grade Distribution of 150 Girls of Monterey

Age	Grade Classification		Total	Per Cent
	Seventh	Eighth		
10-6...10-11	1		1	0.67
11-0...11-5	2		2	1.33
11-6...11-11	14		14	9.33
12-0...12-5	26	4	30	20.00
12-6...12-11	17	13	30	20.00
13-0...13-6	10	23	33	22.00
13-6...13-11	9	12	21	14.00
14-0...14-5	2	6	8	5.33
14-6...14-11		9	9	6.00
15-0...15-6				
15-6...15-11		1	1	0.67
16-0...16-5		1	1	0.67

As the table indicates, 21 seventh graders and 17 eighth graders, or a total of 25 per cent, are older than the average age for their particular grade. The retardation may be due to two factors: the language handicap which retarded some of these girls in the lower grades and a low mental ability, as explained in the previous chapter.

Occupation of Parents

Since the father's occupation affects the economic status of the family and therefore the mode of living, this was ascertained for each family. The characteristics of the population by the United States Census Bureau were used for classifying the occupation as listed by the girls. The distribution of occupations of the fathers of the girls is shown in Table 4.

Table 4

Occupation of the Fathers

Classification of occupation	Total for each occupation	Per Cent
Professional workers	3	2.2
Farm managers	2	1.5
Proprietors, managers officials	19	13.8
Clerical sales,	6	4.4
craftsmen, foremen	26	19.0
operatives	13	9.5
Service workers	6	4.4
Laborers	56	40.8
Army	6	4.4
Total	137	100.0

Of the thirteen for which no occupation was listed, one girl reported that her father had retired from the fishing business, six reported that their fathers had died, and there was no information for the other six.

It will be noted that the majority of the fathers are to be found in the laboring group, and the minority are professional workers. A further study of the work of the fathers showed that 67 per cent were employed full time and 24 per cent had only part-time employment. Many families depend upon the older children for furnishing a part of the family income.

The majority of mothers, 107, or 78 per cent, are housewives. Of the remaining 25 mothers, five are engaged in clerical occupations, 17 in domestic or personal services, one in professional work, and two in business. Twenty per cent of the mothers work part time.

Earnings of the Girls

Another view of the economic status of most of the families represented in the schools is shown in the number of girls who earn a part of their money.

Table 5

Sources of Money Earned by the Girls

Ways of earning money	Number
Care for children	55
Housework for others	18
Cannery work	1
Picking fruit	19
Total number of girls who earn	61

These girls earn money in the kinds of work expected of junior high school girls. Of the 40 per cent who earn money, a few earn enough to buy all of their own clothes but the majority use their money for part of their clothes and for incidental expenses.

Size of the Household

The size of the families of which the girls were members is indicated in Table 6.

Table 6

Number of Persons in the Household

Number of persons in household	Number cases reported	Per Cent
2	2	1.33
3	16	10.67
4	33	22.00
5	44	29.33
6	25	16.67
7	10	6.67
8	6	4.00
9	2	1.33
10	2	1.33
No reports	10	6.67
Total	150	100.00

The average sized family represented by the girls in the seventh and eighth grades is 5.7 persons. This figure is higher than that for the average family of the United States, which is 3.8.[1]

[1]World Almanac and Book of Facts, 1942.

Home Duties of the Girls

Considering the size of the family and the economic status as shown by the father's occupation, it seemed probable that these girls would have extensive home responsibilities. The following table shows the housekeeping activities reported by the girls.

Table 7

Home Duties Reported by the Girls

Activity	Regularly		Occasionally	
	N	%	N	%
Make own bed	118	78.67	21	14.00
Put bedroom in order	118	78.67	16	10.67
Clean bedroom	102	68.00	14	9.33
Clean kitchen	96	64.0	23	15.33
Put other rooms in order	88	58.67	37	24.67
Clean living room	87	58.00	26	17.33
Clean bathroom	78	52.00	25	16.67
Wash and dry dishes	112	75.00	21	14.00
Assist with preparation of meals	86	57.33	25	16.67
Prepare meals	10	0.67	40	2.67
Assist with family ironing	50	33.33	75	50.00
Assist with family washing	38	25.33	49	32.67
Do family ironing	11	7.33	17	11.33
Do family washing	2	1.33	11	7.33
Help with family mending	40	26.67	49	32.67
Assist with the family sewing	0	0.00	23	15.33

It is evident that these girls are responsible for many household tasks. The three activities most frequently reported were those pertaining to the care of their own room. Out of the total 150, 132 girls make

their own bed, 134 put their room in order, and 116 clean their own room, each activity performed regularly or occasionally. Next in order of those activities for which they are responsible is the washing and drying of dishes and the cleaning of other rooms in the house.

It is interesting to note that 111 girls report helping with the family meals. From the survey the extent of this helping was noted as preparing a single dish while mother did most of the preparation.

In view of the extensive list of home activities reported, it seemed advisable to include instruction in these in the course and to provide space for a laundry and living room in addition to the food preparation and clothing areas formerly provided. Provision for a bed and cleaning equipment was likewise a necessity.

Sewing Machines Found in the Homes of the Girls

It will be noted that few girls assist in the family sewing. Because of this fact a check was made on the sewing equipment in the homes of these girls, results of which are recorded in Table 8.

Table 8

Sewing Machines Found in the Homes of the Girls

Machines reported	Number	Per Cent
Treadle	107	53.5
Electric (cabinet)	36	18.0
Electric (portable)	7	3.5
None	50	25.0
Total	200*	100.0

*Includes 50 girls who were not in school during the entire semester.

One-fourth of the total number of girls do not have machines at home. This fact and a lack of skill in sewing are the two factors influencing the small amount of sewing done by the girls at home.

Experiences with Children

As many girls come from large families, it seemed likely that they would have certain responsibilities in regard to taking care of their younger brothers and sisters. These experiences are shown in Table 9.

Table 9

Experiences with Children as Reported by the Girls

Experiences	Number
Put to bed	40
Care for them in the afternoon	39
Take walking	39
Tell stories	39
Dress	37
Prepare food	34
Feed	34
Bathe	31
Total number of girls reporting experiences	71

The majority of girls expressed themselves as enjoying younger children, and many of them help their mothers in being responsible for their younger brothers and sisters after school hours.

As 47 per cent of the girls take care of younger children, it seemed advisable to increase the time spent on this unit of work and provide space and equipment for this activity.

The girls of the seventh and eighth grades of Monterey are slightly older and more mature than other groups at the same grade level. Many come from large families of limited income and therefore they have many home responsibilities. As they have some experience in the activities related to homemaking, they are very much interested and eager to take as much work in home arts as possible.

The Homemaking Program

Purpose and Objectives

The work of the seventh and eighth grades is organized around the natural activities of the home for the purpose of developing understanding and appreciation of the various functions of the family. It aims to assist each girl in taking an active part in the home by accepting responsibilities as a member of her own family group.

Secondly, it helps the girls to solve those problems that occur in their everyday life. These may deal with problems of personal appearance, social adjustment within their own age group, and maintenance of congenial relationships with their families.

A still further aim lies in the development of those skills and techniques incidental to household management. As the prevailing tendency is toward early marriage among these girls, it is believed that this particular aim is of considerable importance.

In addition, home economics provides some opportunity for developing an appreciation for beauty and applying this in color and arrangement in the home.

To these ends, girls participate in a variety of classroom activities and an effort is made to secure the cooperation of the parents in supervising further practice at home.

Course of Study

There have been several changes in the course of study since its inception in 1936. The first outline was evaluated on the basis of pupil achievement and experiences. Information on the home environment and the background of the girls was carefully scrutinized in order to help develop the present course of study which aims to meet the needs of these girls. It is flexible and can be made to fit a particular group or interest of a specific class. Every term the girls help to work out a general outline.

The following outline of units of work explains the general plan of work in use at the present time. (For detailed outline, see Appendix, pp. vii-ix).

Food preparation and meal service. Aspects of this work include the establishment of standards of good nutrition and the purchasing, preparing, and serving of food to meet this end. Special attention is given to the planning and selection of school lunches. The girls receive some catering experiences in taking part in teas and other social functions.

Personal grooming. In this unit an appeal is made to the girl's natural instinct to be attractive. She realizes the desirability of good grooming and learns the necessity of careful selection and care of her clothes.

Clothing construction. This unit is a natural outgrowth of problems discussed in connection with personal grooming. It involves the solution of problems dealing with simple processes of sewing and the selection and construction of a simple attractive dress. Some attention is given to the place of this in the family budget.

Care of the girl's room. The problems in this unit vary greatly. Some classes work on individual problems while others undertake the furnishing of a particular room as a class project. Projects may include the making of a dressing table, curtains, bedspreads, and the refinishing of furniture.

Helping mother. The housekeeping duties of the girls in their own homes are discussed. Activities which may be performed at school to supplement the home experiences are selected. Laundry work has been taught in connection with this unit.

Enjoyment of younger brothers and sisters. This aims at promoting understanding between the younger members of the family, especially in those economic levels where the majority of girls have certain responsibilities in this field. The project includes the making of dolls for the kindergarten and primary grades to be used in their unit "Our Home." Practical experiences are afforded in the taking care of children during Parent Teachers Association meetings.

Family health and home nursing. Under this heading the girls gain some knowledge of the simple phases of home nursing. It would seem practicable in view of current conditions of the times to increase the scope of the home nursing unit.

Phases of Organization Affecting Planning

In addition to the course of study and class organization which has been explained, there are other factors which influence the making of a plan — the number of classes, the time allotment, the size of classes and methods of teaching.

Time Allotment

Classes in homemaking differ in length from 40 to 80 minutes and meet twice each week for the four semesters in which the girls are in the seventh and eighth grades.

Size of Classes

The size of the class naturally varies as the enrollment fluctuates, ranging from eleven to 27 girls per class during this past year with an average size of approximately 20.

Method of Teaching

The methods of teaching to be followed largely determine the amount of equipment to be used in a class. For example, if each member of a class of 20 girls is to prepare a single food at the same time, it would be necessary to have 20 work areas.

In considering the methods to be used in the new homemaking room of the Walter Colton School, it was decided to use a plan of organization proposed by Herrington (4) in which the pupils rotate from one activity to another. In this plan various activities are being carried on simultaneously with duties divided among the group after an organized schedule has been developed, which includes time

for skill drills and for family conferences. For example, in a class of 20 girls using this type of organization one group of four girls might be washing and ironing in the laundry, a second group cleaning the living room, while the remaining 12 in groups of four might be preparing meals.

The content of the course is not affected except that this method of teaching makes possible the enriching of the course for those pupils who accomplish more than others, as the plan allows for individual instruction and the child's evaluation of herself is stressed. It is believed that this plan will create a feeling of individual responsibility and present many opportunities for developing initiative and independence.

For this plan of organization a room often referred to as an apartment-type or combination room is arranged, which has the benefits of the laboratory plus those of the informal socialized atmosphere of the apartment. Fewer units of special equipment are required to care for a greater number of pupils and therefore the new department offers economy in equipment and space allotment.

Summary

All of the seventh and eighth grade girls of Monterey schools are required to enroll in the home arts classes. A study of these girls shows that many come from large families of limited income and therefore have many home responsibilities. A program including clothing construction, food preparation and meal service, laundering, housekeeping and care of children has been outlined for the purpose of developing understanding and appreciation of the various functions of the family. To present these units of work to the girls a plan whereby the girls will rotate from one activity to another has been made.

CHAPTER IV

REQUIREMENTS FOR WORK AREAS IN COMBINATION HOMEMAKING ROOMS

The Characteristics of Good Homemaking Rooms

The essential qualities of the plant and equipment for a homemaking department are similar to those essential in the whole school building. The following qualities have been suggested as desirable for a school building: convenience, comprehensiveness, safety, flexibility, healthfulness, expansiveness, economy, efficiency, and aesthetic fitness (12:14).

Adelaide Baylor, who was chief of the Home Economics Service in 1935, says:

> In planning and equipping the homemaking rooms a few extremely important points should be constantly kept in mind under any and all circumstances. These are qualities of durability, ease of care, attractiveness and safety. Since the function of education for homemaking in the school is to promote satisfactory home and family life in the communities, it is desirable that the plant and equipment for homemaking teaching in the school be based on standards that represent good average present home standards in the community, while at the same time the need and possibility for future up-grading of average homes in the community be kept in mind. (12:10)

Mrs. Lucille Rust, Head of Home Economics Education at Kansas State College, aptly states her conclusions concerning the home economics rooms by saying: (30:31)

(1) They should be as home-like as possible;

(2) They should make possible the carrying on of homemaking activities much as they are done at home;

(3) They should be in keeping with the economic level of the community;

(4) They should make possible the teaching of a broad course in home economics;

(5) They should be such that good and up-to-date methods and procedure of teaching and learning can be followed.

Summing up these recommendations, the layout should be home-like, allow for a diversity of activities under conditions similar to those found in the average home, and permit the use of accepted modern methods of education.

Architectural Limitations

Before planning the layout it was necessary to take into consideration the limitations of the site chosen as the location for the building. As shown in Plate 1, the new room is being placed within the inner court of the already existing school. In order to allow for a second additional building intended for library use, it was necessary to place both of these across the width of the court. The area at the west end of the court was chosen for the home economics room because it has the better

natural light. A floor space of 2051 square feet was allowed for the homemaking building, but of this 819 square feet were used for a teachers' room. The remaining area of 64'0" x 28'0" with an alcove of 14'0" x 14'0" or 1032 square feet was allowed for the homemaking department.

As architecturally planned, the building extends the full width of the court, the north and south walls being closely parallel to the main building. The distance between is such that little or no light would be accessible through windows on these sides. However, small windows are placed in the alcove as more light is accessible to the alcove. The greater part of the light comes from the east side. The wall on this side is 11 feet and six inches high with ten windows each 7'6" x 4'0" extending to within six inches of the ceiling. Each window consists of three large panes constructed so that each unit may be opened irrespective of the others. Along the west wall, which is 15 feet and six inches high, there are seven windows, each 5'0" x 4'0" extending to within six inches of the ceiling. The reduced height of these windows provides more wall space beneath, thereby permitting additional storage accommodations. In the alcove where the walls are 15 feet high, there are two windows on each

wall, each 4'0" x 2'6" extending to within nine inches of the ceiling. The window area of the homemaking unit is approximately 500 square feet.

Two entrances are planned from the corridor on the west wall, both of which will be used by the girls. The corridor will be reroofed for the purpose of connecting the two buildings and protecting these entrances from inclement weather. Deliveries will be made by the southwest entrance. A third entrance on the east side is from the open court and is approached from the main entrance and therefore is intended for use by visitors. A door connects the homemaking room with the teachers' room. This will allow for the additional use of the teachers' room as required for special functions as carried out by the homemaking department.

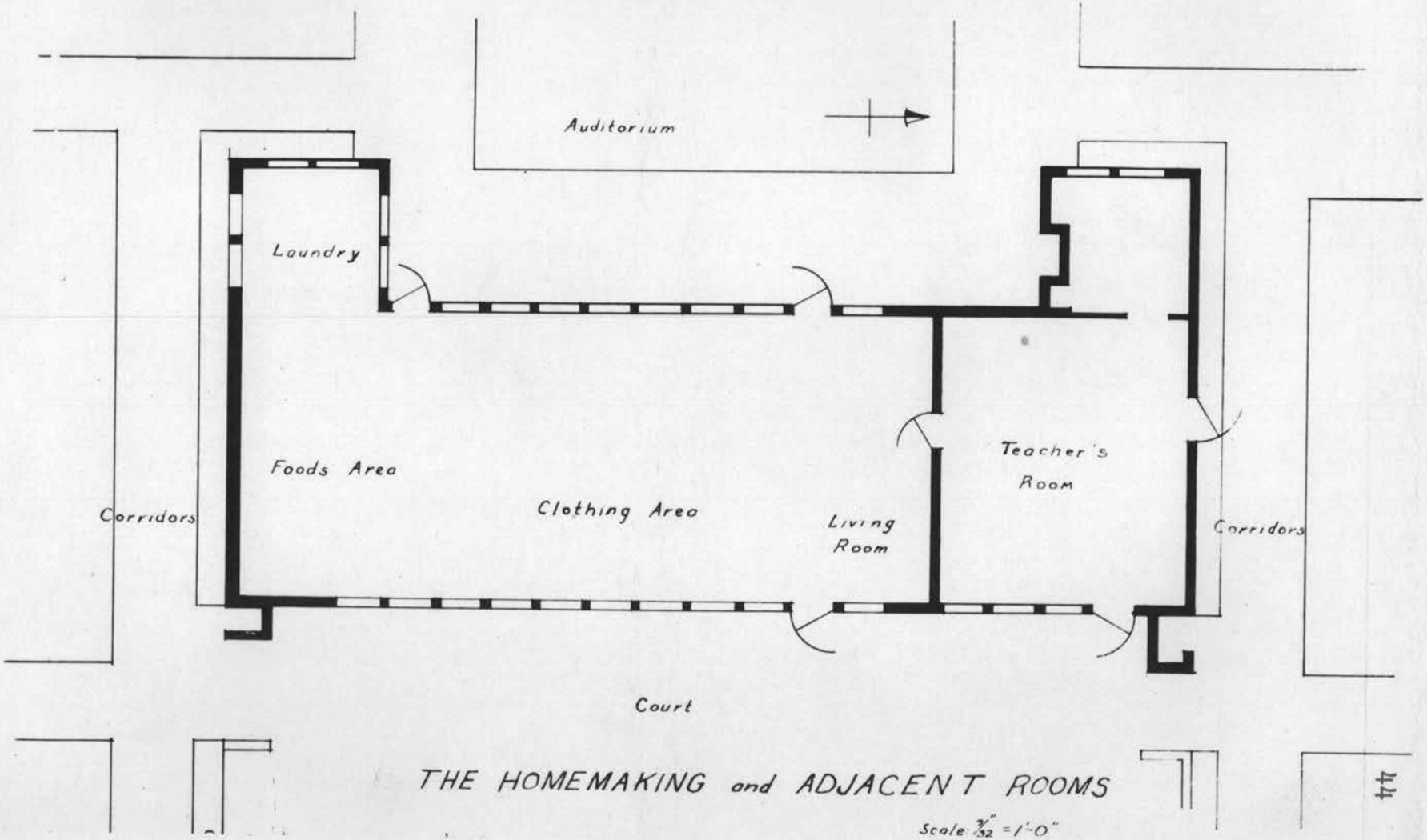
Determination of Activity Areas

In order to plan for the best use of the space allotted to homemaking instruction, a study was made of the activities carried on in each unit of work already described on pages 33-35. (A complete list of these activities will be found in the Appendix, p. iii). This check list was used as a basis for the determination of appropriate work areas. It appeared that four major work centers

would suffice for all proposed activities, a living room, foods, clothing and laundry areas.

Following this, a decision had to be made as to the location of each work area. In order to visualize more clearly the possibilities for arrangement, cut-outs were made to scale to represent the large pieces of furniture and equipment commonly used. These were placed in various positions and combinations. Each possible arrangement was carefully evaluated as to the characteristics deemed desirable for each activity area (appendix, p. x) and as to provision for adequate working space for those students engaged in the activity, together with storage for specific tools and supplies as needed for satisfactory completion of the project. A description of each of these activity areas will be considered separately. Plate 1 designates the location of each area.

PLATE-1



THE HOMEMAKING and ADJACENT ROOMS

Scale: 3/32" = 1'-0"

Living Room

An attractive living room offers an excellent place for activities in which members of the family participate together. Here, therefore, provision is made for the discussion and practice of social relationships. The living room gives the student opportunity for practice in household tasks and for applying the fundamental principles of art to the planning, selection, and arrangement of furnishings for the home. Desirable characteristics for this area are good natural lighting, easy accessibility from the main entrance, and nearness to the food preparation unit.

In order to carry out a practice natural to the home situation in which visitors are received in the living room, it was desirable to place the living room in the north end so that the east door might open into it. As it may be necessary to use the home economics room and the teachers' room for special functions, it seemed practical to place these two similar types of areas adjoining.

Laundry Area

In the laundry, provision is made for the selection, care and arrangement and use of equipment for machine or hand laundering of household linen and personal clothing

and the cleaning and renovation of heavy clothing and of other household articles. It is intended that certain phases of personal grooming which necessitate the use of cleaning agents, such as the cleaning of shoes, shall be carried on in this area. Adequate space will be planned here for the storage of equipment used in flower arrangement.

As one of the requirements for the laundry area is proper ventilation, and as it is intended that only four girls shall be working in the laundry area at the same time, it seemed that the 14'0" x 14'0" alcove provided a desirably sized space.

Foods Area

In this unit provision is made for meal planning, purchase, storage, preparation and serving of foods, together with the cleaning and arrangement of dishes, utensils and storage space.

Every effort was made to provide for those characteristics which are deemed desirable in a foods area. This includes placement on an outside wall for economy and convenience in plumbing, nearness to the social center and delivery entrance, a window in each unit for natural light and ventilation, adequate space for storage,

and sufficient space adjoining the unit for family meal service.

This area was placed at the south end, conveniently adjacent to the laundry, in order that the main body of the room should be left free and capable of greater flexibility of arrangement. Unfortunately there is little or no natural light and ventilation in the foods area, but this deficiency will be counteracted by artificial ventilation and lighting.

Clothing Area

In this unit provision is made for the planning, selection, purchase, construction, renovation, and routine care of clothing. Other purposes for which this area can be used are personal grooming, sewing problems in connection with household furnishings and community projects, and care and arrangement of closets and other storage spaces for clothing. In view of the abundant table space to be provided, it was intended that this area would be used for study and for discussion.

The requirements of the area chosen for clothing include good lighting and facilities for adequate storage and arrangement for fitting garments. In a combination room it would be advantageous to have this area near the laundry unit.

The clothing unit was located in the center of the room between the living room and foods area. Since the equipment used for activities related to clothing is of the movable type, this area lends itself to various arrangements and may be used for meal service in large quantities. There is good natural ventilation and light in this area.

Summary

In planning the layout of the combination room it was first necessary to determine the kind and number of work centers which would meet the purposes for which the room was intended. This was determined by a check list of activities as found in the course of study. It seemed that four work centers, a living room, laundry, foods and clothing areas, would provide the work space and equipment necessary for all the activities. Desirable characteristics of each unit were then considered and each activity assigned to a tentative location within the space allowed for homemaking.

CHAPTER V

SPECIFICATIONS FOR SUGGESTED AREAS

This section presents the detailed plans for the specific work areas and includes the arrangements for storage facilities.

The following are the steps by which these specifications were determined.

(1) An outline of typical lessons to be taught in connection with each activity including the processes used and the equipment needed was made (Appendix, p. vii).

(2) Standards for space allowances and heights recommended in the related studies (28,31) and those developed by the Department of Home Economics Research of the Oregon State Agricultural Experiment Station (14,16,17) were adapted to meet the needs of this particular situation. Where there were no recommendations for certain standards, these were determined by experimentation (Appendix pp. xi-xix).

(3) A study of the dimensions of equipment which must be purchased from commercial sources was made. Equipment in this category consisted of such pieces as sewing machines, laundry tubs, and living room furniture.

(4) The last step was the designing of cabinets to hold the small equipment. The maximum measurements of

the small pieces of equipment to be stored were recorded. Each piece was then assigned to an appropriate work center. The minimum space necessary for storage was determined on the basis of measurement with a two inch allowance between articles for handling. Plates, kettles, bowls, and similar articles were nested if they were duplicated or used together. Otherwise they were stored singly.

A cabinet providing the desired height and work surface was designed to hold the equipment assigned to it. The drawer and shelf space was then tested as to its adequacy and adjustments made.

Provision for Meal Service and Food Preparation

Specifications for Unit Kitchens

According to recent studies, unit kitchens comprising space and equipment for four girls are preferred as the most suitable type of work center. In view of the available space, three U-shaped unit kitchens were planned along the south wall with a fourth unit placed at right angles to these on the west wall (Plate 2). This fourth unit was recommended by Miss Maude Murchie, Chief, Bureau of Homemaking Education, State of California. She believes that four kitchens should be the minimum number planned in a combination room.

The space required for one unit kitchen consists of adequate work space for four girls together with storage facilities for necessary equipment. From Anderson's study (28) it may be concluded that the minimum distance between two counters of a U-shaped unit kitchen should be five feet and that the minimum length of table or counter space for two girls working side by side should be 60 inches (Appendix, p. xxx). Assuming that the width of the counter is 24 inches, the minimum size of one unit kitchen would be 9'0" x 7'0", or 63 square feet. The space allowed for unit kitchens in the tentative plan provided space for three unit kitchens of this minimum size.

Height. The height of the work counter was determined to be 31 inches. This was derived from a study of all available data, including Bennett (1:196), the Bureau of Home Economics Study (11:97), and the Oregon Studies (16,28).

In order to provide for shorter girls, an additional working space at the height of 29.5 inches is provided by a pull-out board.

Sink. In planning a sink in a kitchen the two major problems to be considered are height and placement. According to Anderson's study (28:106) the rim of a sink 24 inches or more in length should be 37.5 inches from the floor if it is to be used for dish washing.

In order to avoid two different working heights in the same unit kitchen it was decided to use a catch-basin type sink and to wash dishes in a pan placed on the work table. As this basin will not be used as a work center, and as there is no natural light along the south wall, it seemed advisable to place this sink in the center of the counter along that wall.

Stove. Gas stoves of the apartment type will be used in the three units, as gas is the most commonly used fuel in this community. In each unit the stoves are placed at the open end to allow for free circulation of air, and in units one and two they are placed back to back so as to lower the cost of installation. The stoves to be installed are of a type in which a narrow base may be substituted for the higher standard base, thus providing the desired working height of 31 inches. Similarly, an electric stove is to be installed in the fourth unit kitchen.

Cabinets. All the work done in the kitchen consists of preparation and serving of meals, clearing away and washing of dishes. A study was made which consisted of a plan of lessons to be given with the utensils necessary and their frequency of use. This list was checked with the list prepared by Dougherty (29:51) and was modified

as necessary. Finally the utensils were divided into those needed in the unit kitchen and those to be stored in other cabinets readily accessible to each kitchen (Appendix, pp xv-xix).

Each article was then assigned to a specific space. It was determined by experimentation that sufficient storage space for these would be provided by two sections of drawers, one on either end of the U, together with 15 feet of shelving.

Plates 2, 3, and 4 give the detailed plans of arrangement of the three unit kitchens having identical arrangements.

Plans for unit kitchen number four are slightly different because of its placement and the fact that it will be used as a demonstration center and a preparation center for guest dinners and teas. The counter spaae is six feet long and 31 inches high. A movable utility table will supplement the work space of the built-in counter.

Tables. It is evident in the study made by O'Reilley (30:112) that homemaking educators believe it necessary to provide equipment for meal service for the family group. The study indicated that a table and chair for every group in close proximity to the work area are desirable.

It was found that small tables 3'0" x 4'0" will be most satisfactory for meal service in the three unit

kitchens. According to Anderson's study (28:131) the height of 25 inches for a table used for eating is suitable to the sitting height of the average student. The chairs to be used with this table are 16 inches high (28:72).

Dishes, flatware, and linen. It seemed desirable to plan storage for service for six as the girls will very often invite another member of the class to be their guest. The original plan included cabinets over the sink for the storage of china. When the cabinet space was studied, it was found that with one additional shelf below the work counter, adequate storage could be found for the china, thus eliminating the cost of the proposed cabinets above the sink and giving more space directly over the sink.

Additional Storage Convenient to Centers used for Meal Preparation and Service

In addition to the storage space in each work unit, storage space is provided for staple food supplies, perishable food supplies, dishes, glassware, silver, linens, large cooking utensils and pupils' aprons.

Additional cooking utensils. A tall cabinet is a convenient method of storing the utensils infrequently used. The dimensions of this cabinet are 2'6"x2'0"x6'8". A diagram of the cabinet will be found on Plate 9.

Food supplies. The storage space required for food supplies was based upon a check of the food purchased during the last four years (Appendix p. xxi) and the lessons planned for the coming year (Appendix, p. vii). This food storage has been planned in three units: a refrigerator for perishable foods, a cabinet for staple groceries, and an ant-proof cooler. These are placed adjacent to the large unit kitchen, details of which are shown on Plate 9.

Storage of china and flatware for guest meals. The girls of Monterey have many opportunities to serve light refreshments and meals for guests. The number served ranges from six to 20 persons for luncheons or dinners and 25 to 75 persons for tea. Assuming the use of the cafeteria equipment for the large numbers served, it seemed desirable to plan storage for dishes and flatware for 24 people, with an additional 12 cups, salad plates, salad forks, and sppons for tea service. Provision for storing this equipment is made in a tall cabinet, the details of which are shown in Plate 8.

In the same cabinet the silver will be stored in two large chests, each accommodating a set of 12. These chests are so placed that they may be opened while on the shelf. They may also be taken out of the cabinet and carried to the place where needed.

Apron storage. As there are usually 10 different classes enrolled in homemaking with an average enrollment of 20 in each class, it was necessary to determine the minimum amount of space required to store 200 aprons. It was decided that the aprons should be hung and therefore should be stored in a closet. It seemed that if the aprons could hang from hooks placed parallel with the side wall of the closet, the best use would be made of available space. By placing wooden pegs three inches apart on both sides of a two-foot board, storage space was provided for 16 aprons. By making this board deeper at one end, the pegs were placed at different levels, thereby permitting each girl to find her own apron quickly. If these racks are spaced 12 inches apart, a storage area of 12 feet would be sufficient. Details of this cabinet are shown on Plate 10.

Provision for Activities Related to Clothing

It is recognized that equipment for sewing in the average home is frequently inadequate as to type and

arrangement. The school carries a definite responsibility for setting an example which can be carried over into the home as a means of increasing efficiency in the making of new garments as well as the care of old.

To plan adequately the space needed for sewing activities, a list of the kind and amount of equipment, space required for the use of this equipment, and adequate storage facilities was made.

Sewing machine. According to the Space and Equipment Bulletin (12:70), one sewing machine for every four class members is considered the minimum. For the Walter Colten School it was planned to have ten to twelve girls working in the clothing area. On this basis it seemed desirable to provide for three machines as a minimum. Since, however, in view of the extensive extra-curricular sewing work done, three machines have been inadequate in the past, it is planned to provide five machines, namely, one cabinet electric machine, two portable electric machines, and two treadle machines. The choice of type of machine is partly based on those found in the homes of the girls, as shown on Table 8, page 30.

Tables for sewing. The minimum table space recommended by the space and equipment bulletin (12:69) is four square feet per pupil. As 12 girls may be working

in this area, 48 square feet of table surface was indicated. The height of 27 inches for sewing tables was recommended by Stayton (31:37) in her study pertaining to clothing laboratories, and in view of the fact that these tables will also be used for guest luncheons and dinners, it seemed advisable not to change this recommendation. Using these dimension standards, three tables were designed (Plate 15). A slide extension on the end of each of these tables will provide additional space for work.

Irons and ironing board. Quoting from the standards given in the Space and Equipment Bulletin (12:73), there should be one ironing board and iron for every ten to 12 girls. This would indicate that one iron and one board will be sufficient for the clothing work but a study of the extra-curricular activities shows that there will be occasions for the use of more than one board in this area; accordingly two irons and two ironing boards have been allowed.

The ironing boards will be of the revolving type and built in the counter under the windows along the east wall (Plate 16). These will be 31 inches high and four feet and six inches long.

Mirror. One full-length mirror with good light is an essential. This will be built in connection with the

closet doors of the roll-away bed as seen in Plate 18.

Storage of tote trays. Individual work of the girls will be stored in tote trays. Suggested sizes of trays as given in the Space and Equipment bulletin (12:99) are: 16" x 18" x 4" and 10" x 16" x 4". After experimenting (Appendix, p. xxiii) with various sized boxes, it was found that one 12" x 16" x 4" would hold the work conveniently and permit of easy handling. These trays will be stored in cabinets built beneath the counter space along the east wall. The total space of this counter required for cabinets to store 80 trays is 21'2" long x 2'0" wide x 33" high.

Unfinished garment closet. A closet 3'0" wide x 6'8" high on the west wall will provide storage for unfinished dresses. This closet will have a rod placed four feet and six inches from the bottom with two shelves directly above it. As this closet is placed near the living room, it was decided that it could also be used for the storage of guest wraps if necessary.

Additional storage. Consideration was given to the storage of equipment needed for sewing and for miscellaneous articles such as card tables which could be grouped conveniently with the sewing equipment. The plans for this storage are found on Plate 17.

Provisions for Activities Related to Home Laundering

In planning the layout and equipment for the laundry the following points were considered.

(1) The number of girls working in this area at one time.

(2) The type of work usually undertaken in a home laundry.

(3) The additional storage facilities needed for equipment for those other activities which are to be carried out in the laundering area.

It seemed advisable to plan for three work centers in this area: a washing, an ironing, and an auxiliary work center.

Washing Center

The large pieces of equipment needed in this center consist of stationary tubs and a washing machine. Two-tray stationary tubs were placed along the south wall so as to be away from main student traffic in and out of the laundry and in line with the plumbing of the unit kitchens. These laundry trays were placed 12 inches from the wall, permitting a shelf on the level with the top of the trays, and at a height of 33 1/2 inches, thus meeting the needs of the average girls of the school.

As the windows are placed high, there is ample space beneath them for a cupboard containing six feet of shelving eight inches wide which provides storage space for laundry supplies.

Service table. In order to carry the wet wash from the tubs to the dryer, a movable service table (Plate 14) was designed. In planning this table, provision was also made for temporary storage space for the packages of laundry the girls will bring from home, and the occasional storage necessary for soiled linen.

Dryer. A commercially built dryer will be installed. The floor space required is 2'0" x 5'0". It has a capacity of 70 linear feet.

Ironing Center

Provision was made for two portable ironing boards to be used in this area. These will be made 31 inches high. They will be stored in a closet designed for them (Plate 13). The irons will be placed immediately above these on a shelf. The ironing cords will hang on suitable hooks placed at the side of the closet. Along the west wall within the laundry will be two small cabinets which contain fan-shaped clothes racks to be used for the airing of ironed clothes.

Auxiliary Work Center

Table space is provided by placing a counter back to back with the adjoining section of the unit kitchen. This counter is 31" high x 24" wide x 7'0" long; the space below is enclosed and provides storage for the laundry utensils and packing materials. An electric plate to be used for starch making is placed at the end of the counter. The details of this counter with the storage facilities are shown on Plate 11.

Flower arrangement. It was determined that shelving six feet long and 12 inches wide and one four feet long and 20 inches wide would provide ample storage for all types of flower containers and other equipment necessary for flower arrangements. Space is allowed in the laundry area for these cabinets, as shown on Plates 11 and 12.

Other Storage Facilities

Careful arrangement of storage space is important because homemaking rooms and equipment are used continually by a large number of different individuals. The storage facilities in each area were made as complete as possible. Plans are given here for storage of equipment and supplies needed for other homemaking activities.

The procedure used in planning these storage areas is similar to that used in planning for storage facilities pertaining to the major activities.

Storage requirement in relation to home nursing, health and child development. A "roll-away" bed with storage for bedding and equipment for child development and home nursing units is stored conveniently near the living room in a suitable cabinet (Plate 18). A shelf 21 inches wide and four feet long is adequate for the storing of blankets and mattress pad for the bed.

Storage space for supplies needed for instruction in home nursing is provided by the use of two small trays. Two unassigned areas in this cabinet will be used to store toys and other materials related to the care of children.

Cleaning closet. As it is desirable to keep some of the cleaning equipment and supplies in a separate storage compartment, a cabinet 2'0" deep x 3'0" wide x 6'8" high with two shelves was planned to provide storage for this equipment in the laundry unit. The lower part of the lower shelf is provided with hooks for equipment that will hang.

Standards and practices for storing cleaning equipment are given in the Appendix, page xl, and an illustration of the cleaning closet will be found on Plate 13.

Screens. Storage for three screens is provided near the living room, as it is in this area that they will be used most frequently. The screens are three-fold, each section being 18" wide and 6'0" high.

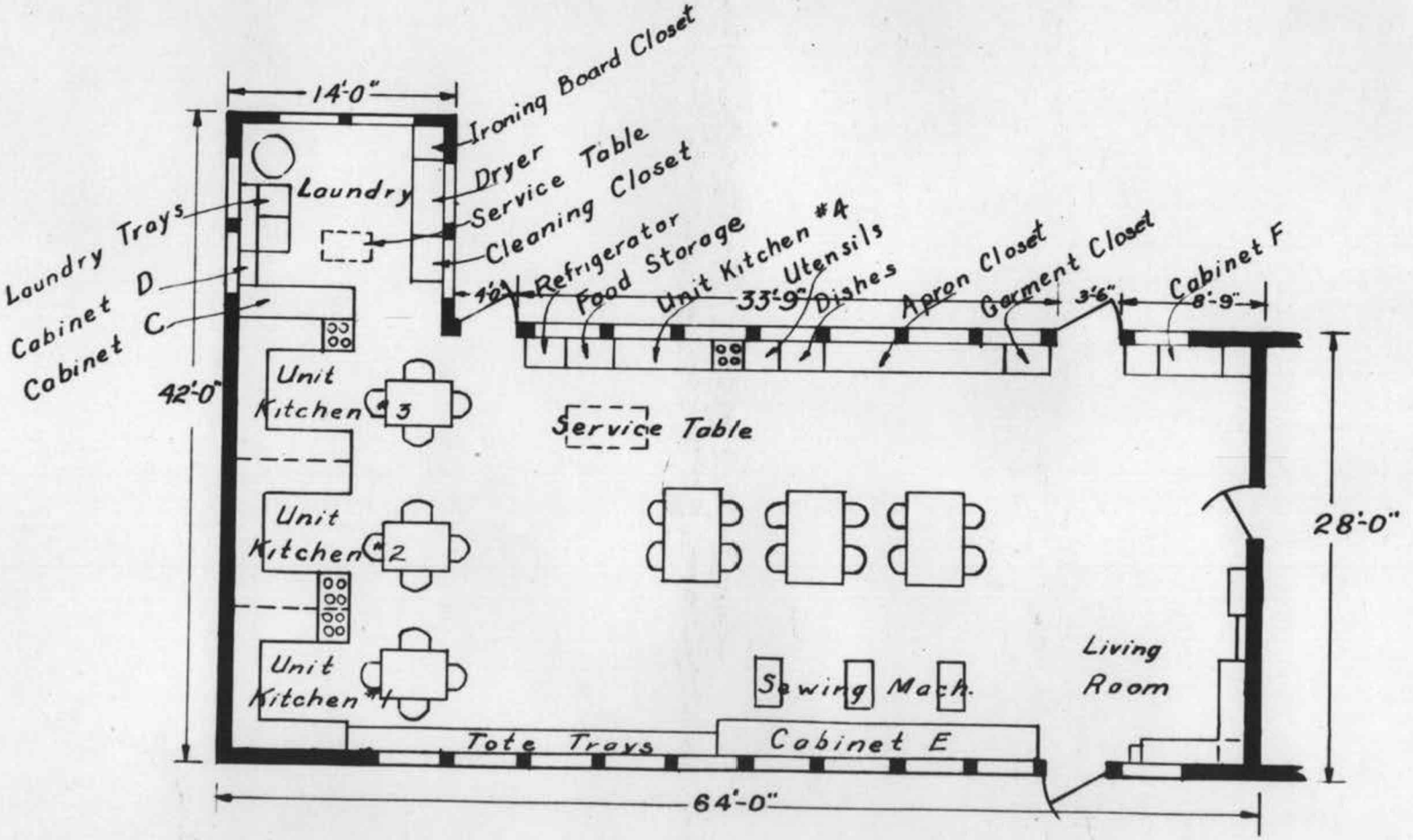
Books and magazines. A book case as well as a desk have been planned as a part of the living room furniture. It was decided that ten linear feet would provide ample storage for reference and text books. The magazines will be stored with other pamphlets and other illustrative material in a cabinet under the counter along the east wall.

Special teaching materials. Provision was made for the use of a movable type of blackboard so that it may be used in any area as desired. When not in use, it will be stored in the closet with the "roll-away" bed. Every unit has adequate tackboard wall space to be used for pictures and other illustrative material. Provision for the storage of illustrative material is made in the cabinets below the counter along the east wall. For large charts and pictures, pull-out trays spaced one and one-half inches apart were planned. Other illustrative material will be either stored in drawers or in files which have been planned as a part of this section. Provision is also made for all necessary writing materials. Detail drawing of the cabinet provided for illustrative material is shown on Plate 17.

Summary

The specifications found in this section are based upon standards recommended in related studies and those determined by experimentation. Storage space was planned from the list of equipment to be used in connection with each activity area. A final plan of the room was drawn after due consideration of all space requirements for various activity areas.

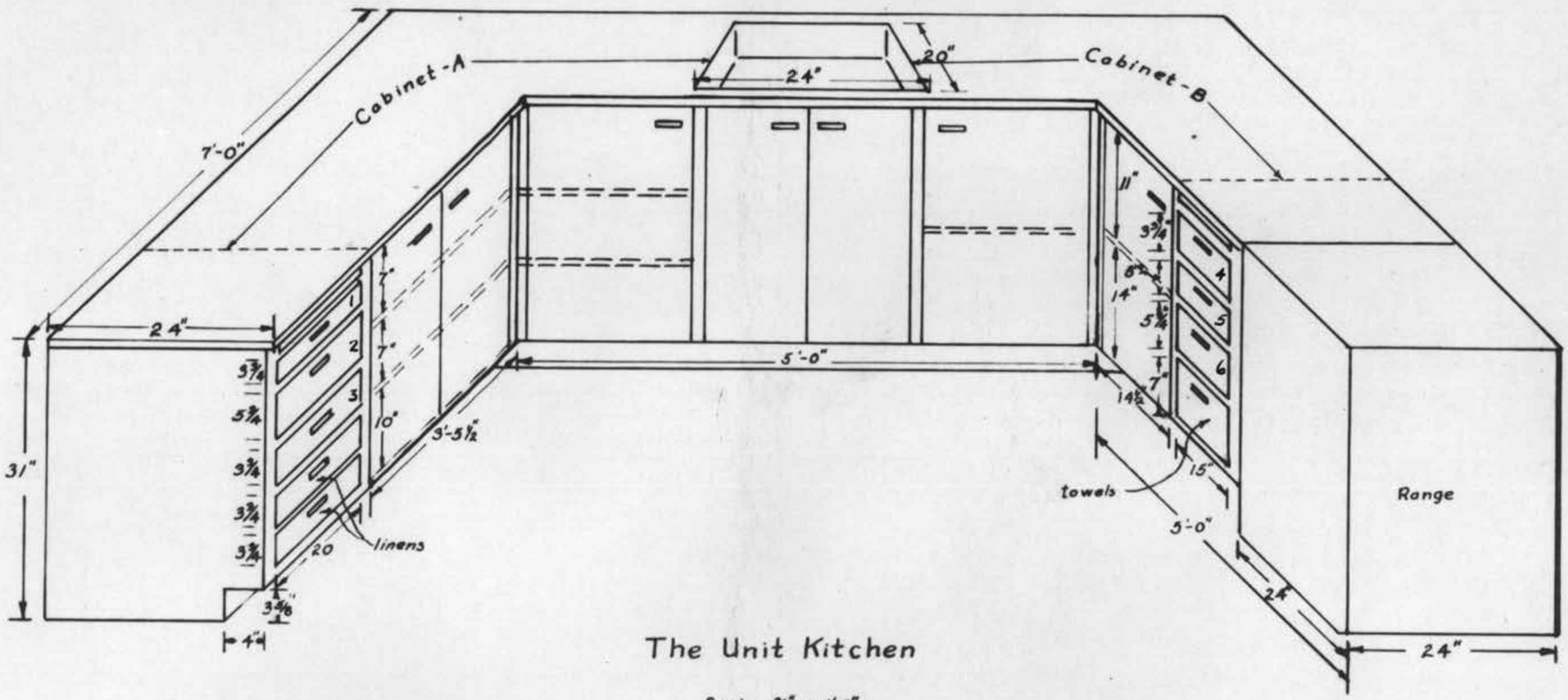
PLATE - 2



FLOOR PLAN of HOMEMAKING ROOM

Scale: 3/32" = 1'-0"

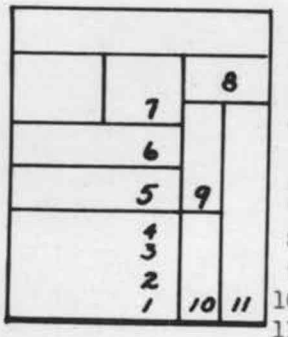
PLATE-3



The Unit Kitchen

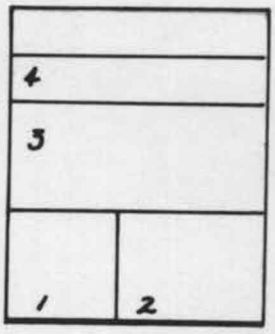
Scale: ¾" = 1'-0"

PLATE-4



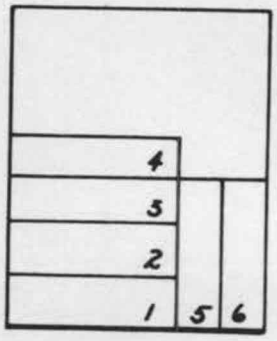
1. paring knife
2. slicing knife
3. spatula ($2\frac{1}{4}$")
4. spatula (4")
5. tablespoons
6. rubber scraper
7. blender
8. cookie cutter
9. teaspoons
10. measuring spoons
11. wooden spoon

Drawer 1



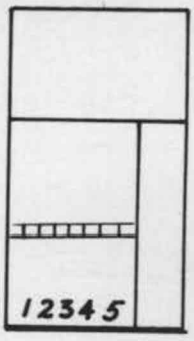
1. glass measuring cup
2. set of metal measuring cups
3. rotary egg beater
4. rolling pin

Drawer 2



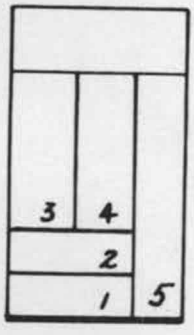
1. knives
2. forks
3. soup spoons
4. salad forks
5. teaspoons
6. serving spoons

Drawer 3



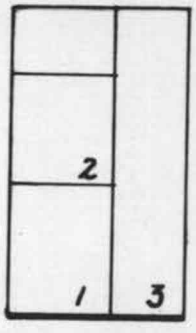
1. paring knife
2. slicing knife
3. case knife
4. spatula ($2\frac{1}{4}$")
5. spatula (4")

Drawer 4



1. measuring spoons
2. teaspoons
3. fork
4. tablespoons
5. wooden spoon

Drawer 5



1. set of metal measuring cups
2. glass measuring cup
3. rotary egg beater

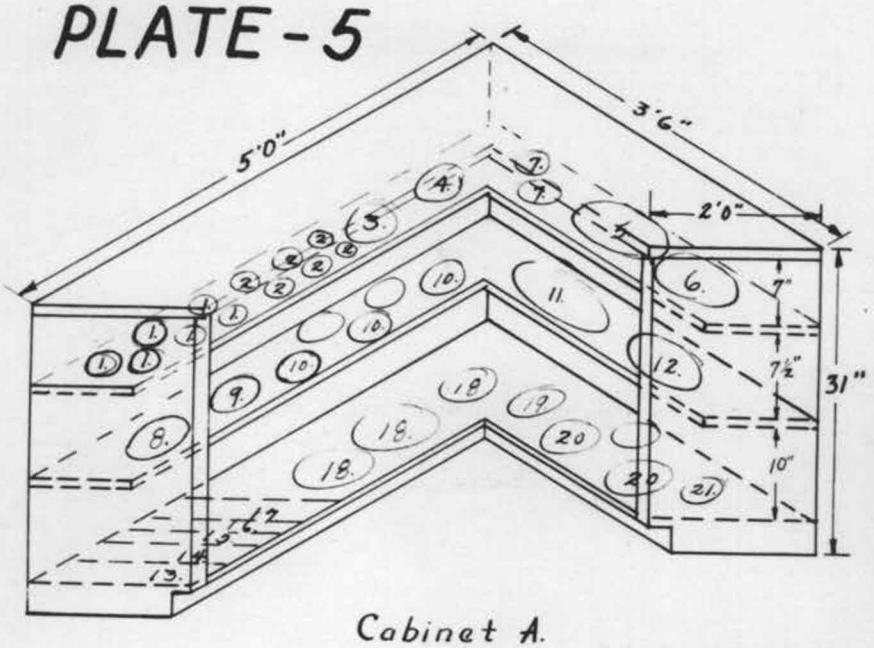
Drawer 6

Storage Facilities within Unit Kitchen

Drawer Insets

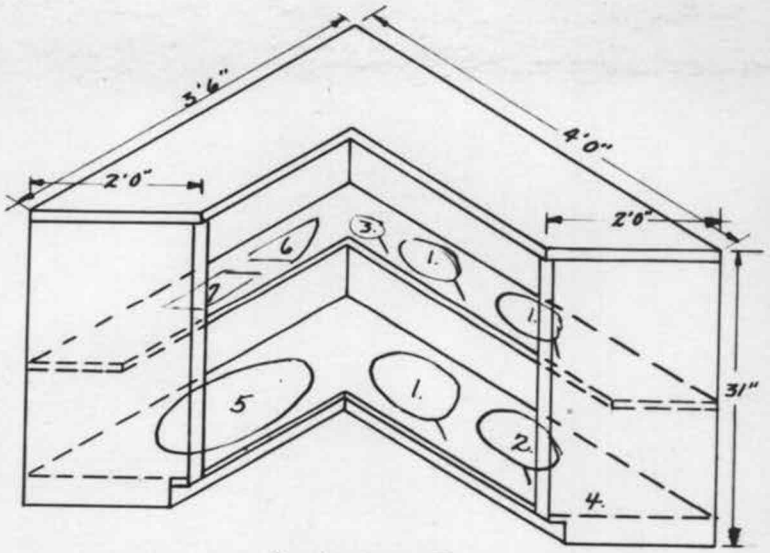
Scale 1"=1'-0"

PLATE-5



Cabinet A.

1. glasses
2. fruit glasses
3. fruit dishes
4. cereal bowls
5. creamer
6. sugar bowl
7. custard cups
8. luncheon plates
9. salad plates
10. cups and saucers
11. vegetable bowl
12. casserole
13. platter
14. pie tin
15. baking pan
16. muffin tin
17. utility tray
18. mixing bowls
19. salt shakers
20. cannisters
21. flour sifter

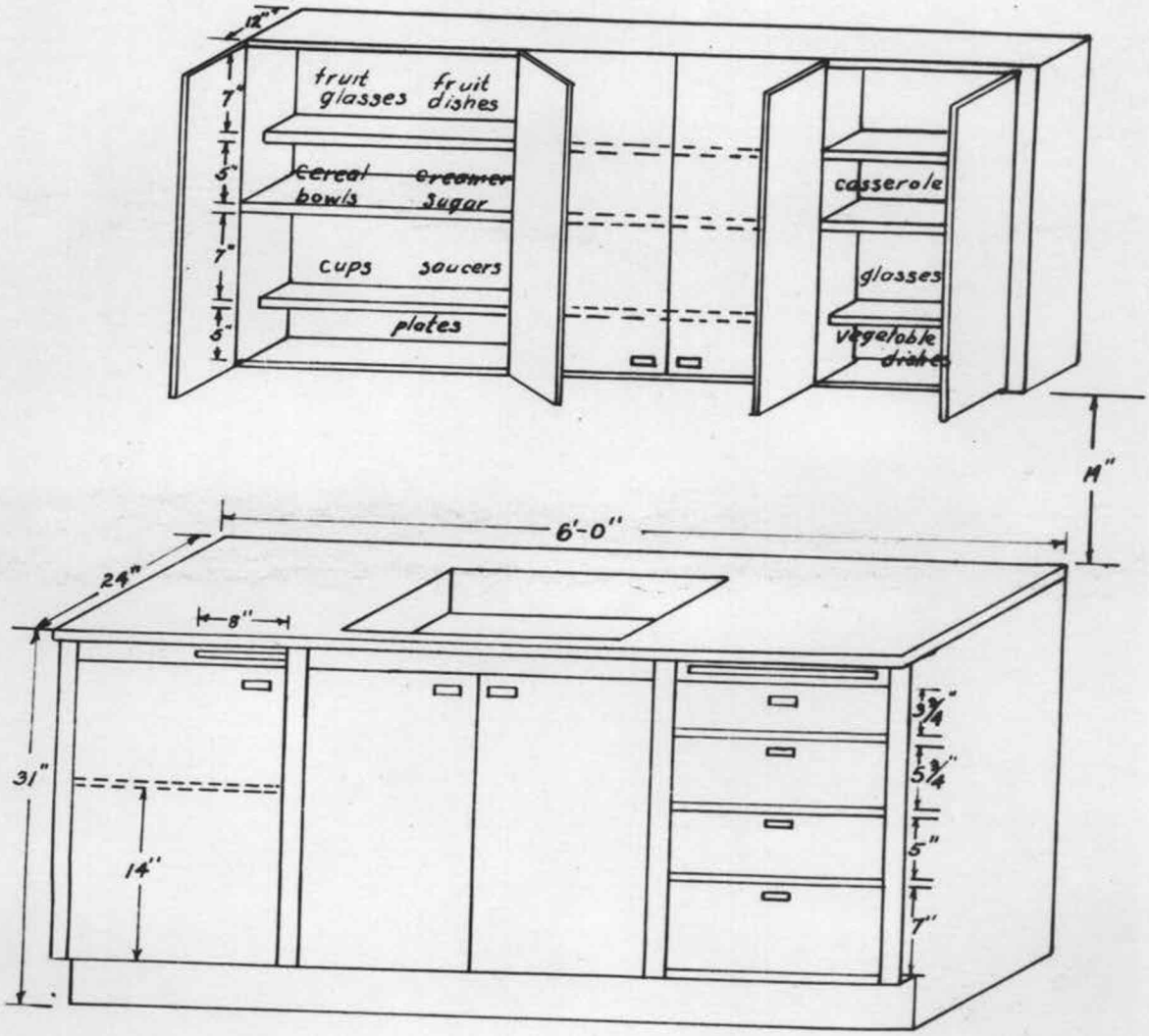


Cabinet B.

1. double boiler
2. frying pan
3. saucepan
4. cake rack
5. dish pan
6. sink strainer
7. soap dish

Storage Facilities Within Unit Kitchen

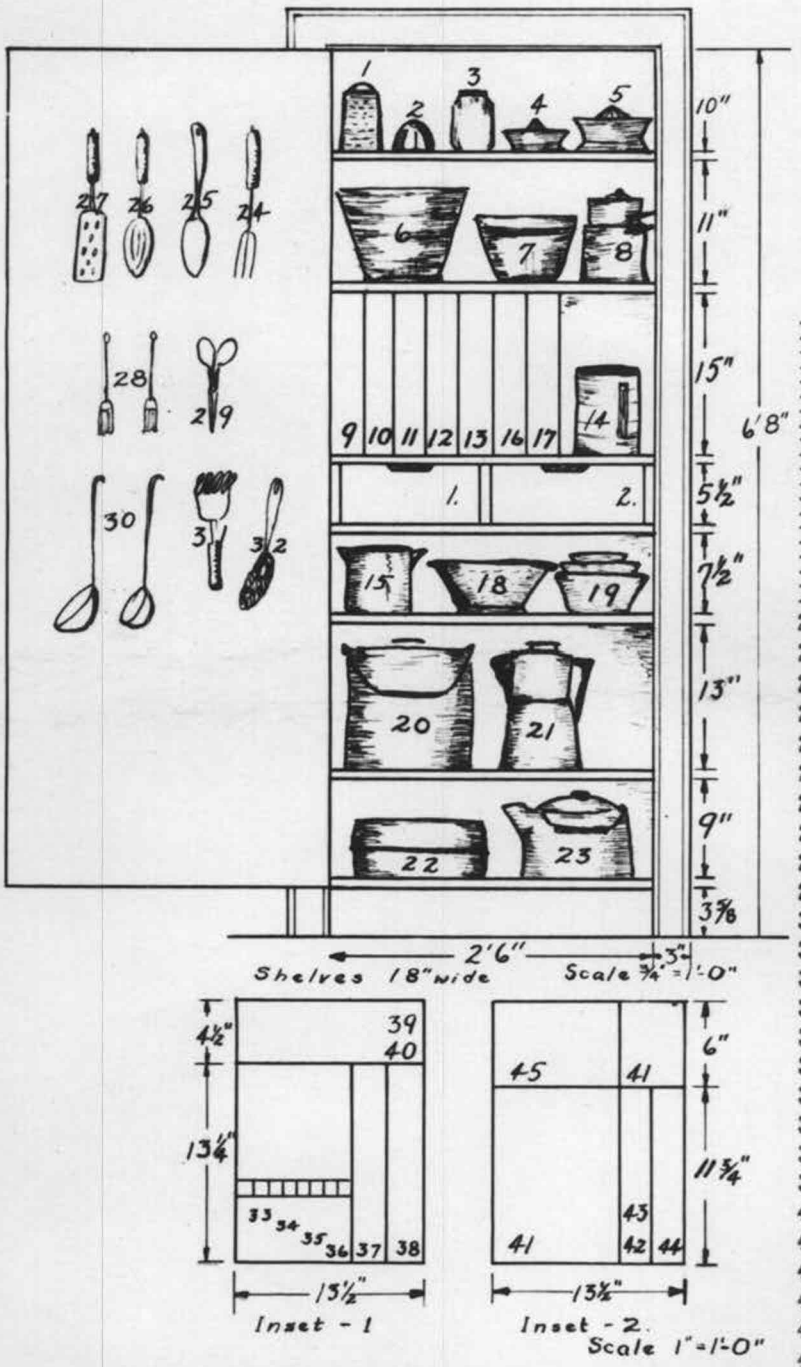
PLATE-6



Demonstration Unit Kitchen

Scale: ¾" = 1'-0"

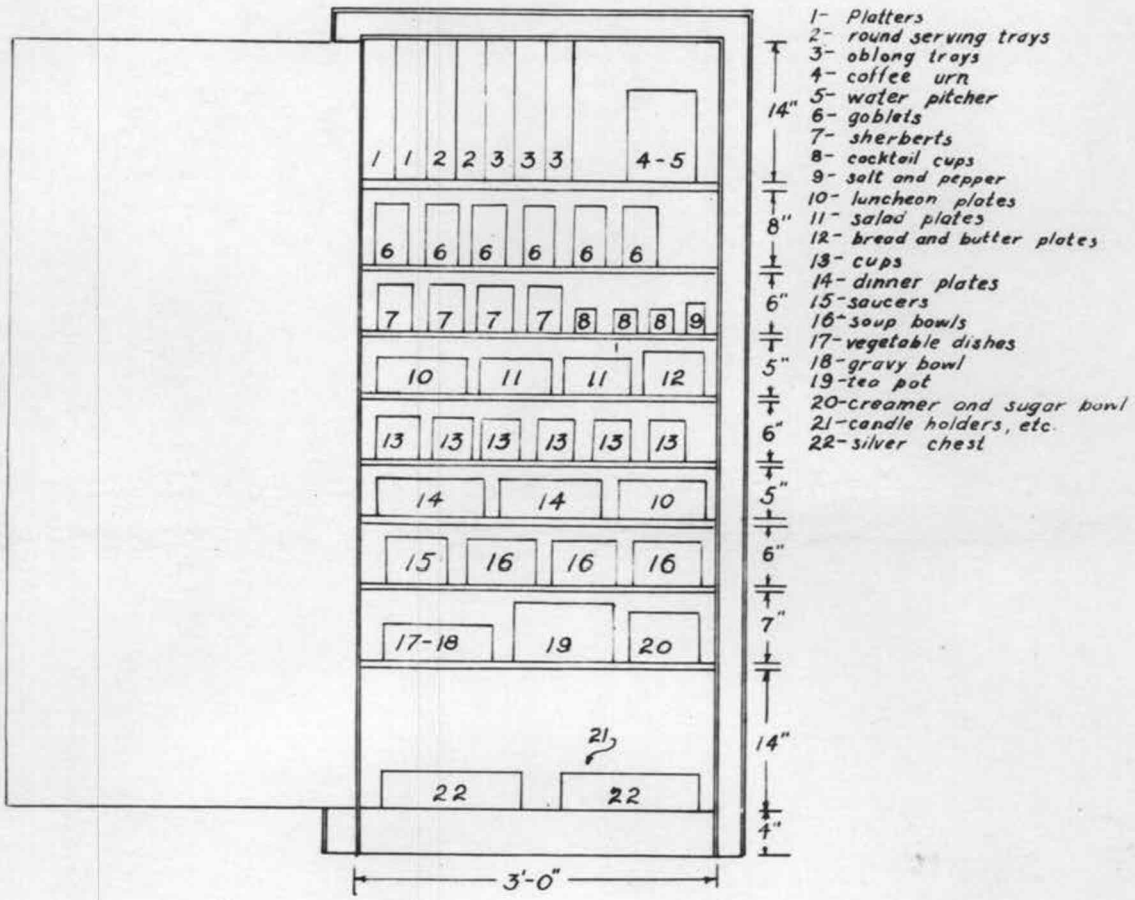
PLATE - 7



1. cheese grater
2. individual jello molds
3. small empty jars
4. lemon reamer
5. orange reamer
6. mixing bowls (3 qt.)
7. mixing bowls (2 qt.)
8. double boiler
9. cake tins
10. cookie sheets
11. pie tins
12. muffin tins
13. frying pan
14. flour sifter
15. saucepan
16. jello ring molds
17. grater (set)
18. colander
19. baking pans
20. steamer
21. coffee pot
22. double skillet
23. teakettle
24. metal fork
25. metal spoon
26. slotted spoon
27. turner
28. pastry brush
29. kitchen shears
30. ladle
31. potato masher
32. wire whisk
33. bread knife
34. butcher knife
35. French knife
36. paring knives
37. candy thermometer
38. meat thermometer
39. nut cracker
40. butter spades
41. meat grinder
42. can opener
43. grapefruit knife
44. melon cutter
45. cookie cutters

Storage for Additional Cooking Utensils

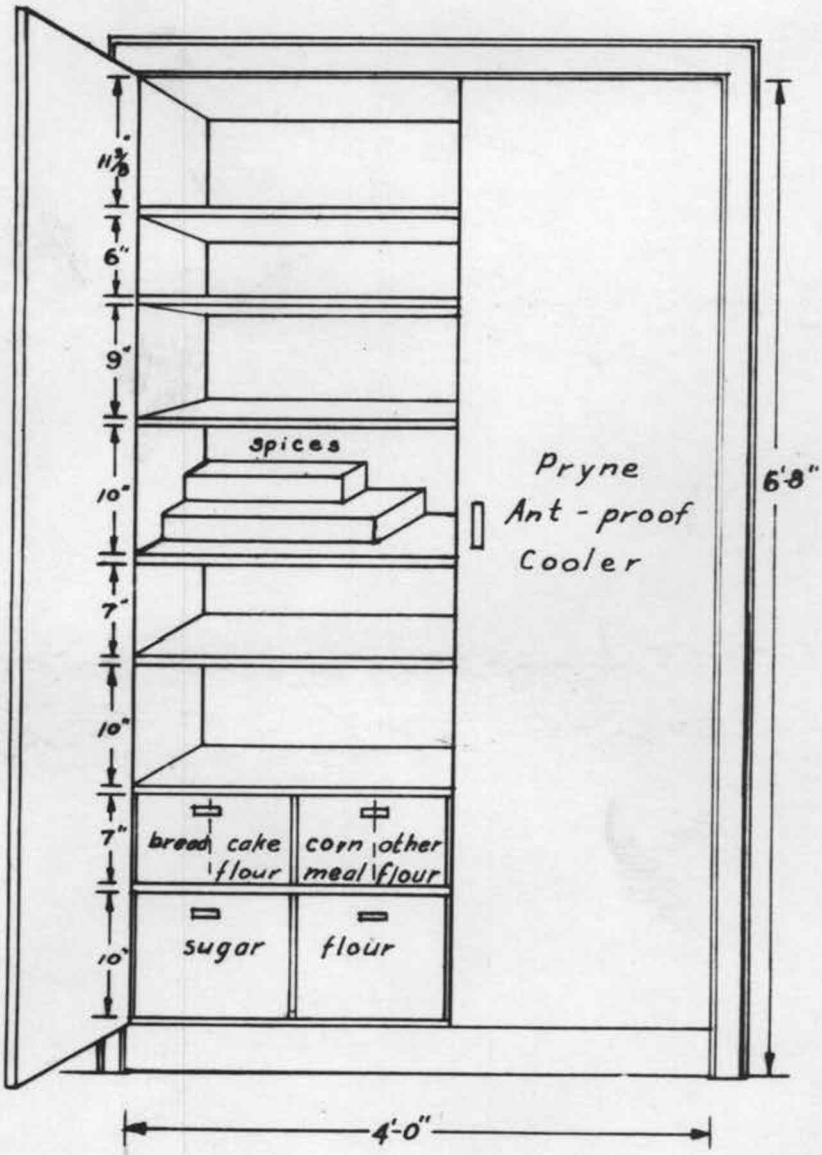
PLATE-8



Storage of China, Glassware & Silver
for
Guest Meals

Scale 3/4" = 1'-0"

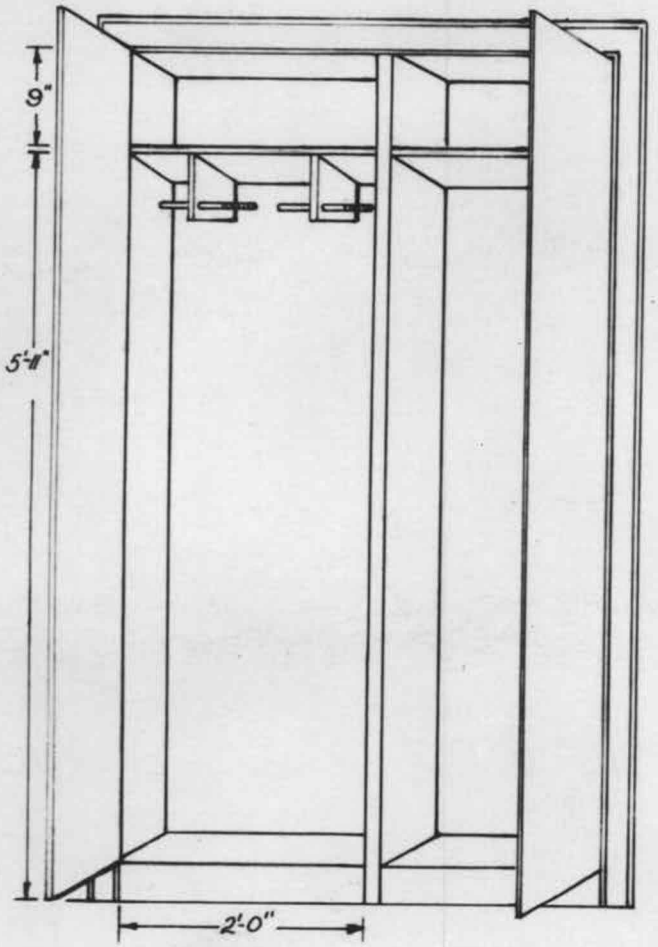
PLATE - 9



Food Storage Cabinets

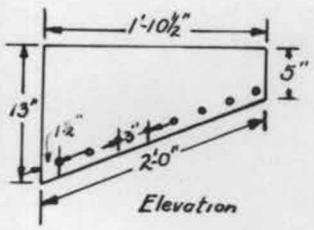
Scale: ¾" = 1'-0"

PLATE - 10

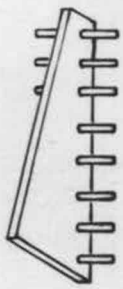


SECTION of APRON CLOSET

Scale: 3/4" = 1'-0"



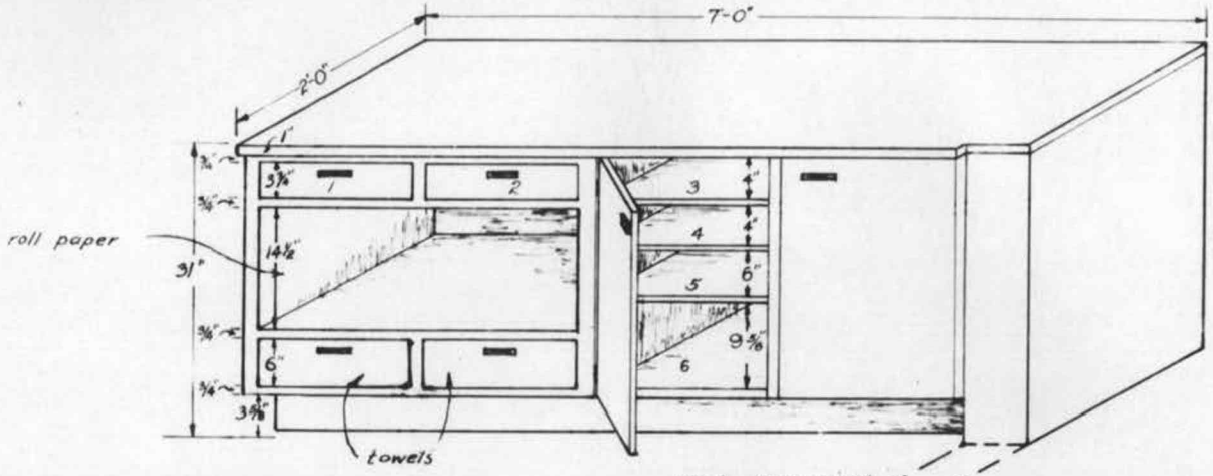
Elevation

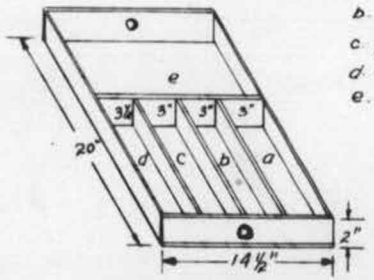


Details of Peg Racks

Scale: 3/4" - 1'-0"

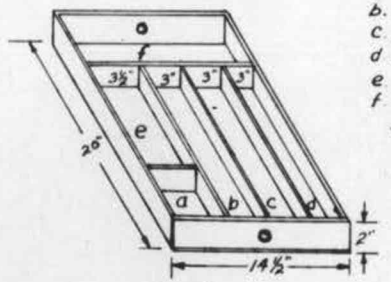
PLATE -11





Inset Drawer -1

a. scissors
b. wooden spoon
c. glass rod and dropper
d. blotters
e. unassigned



Inset Drawer -2

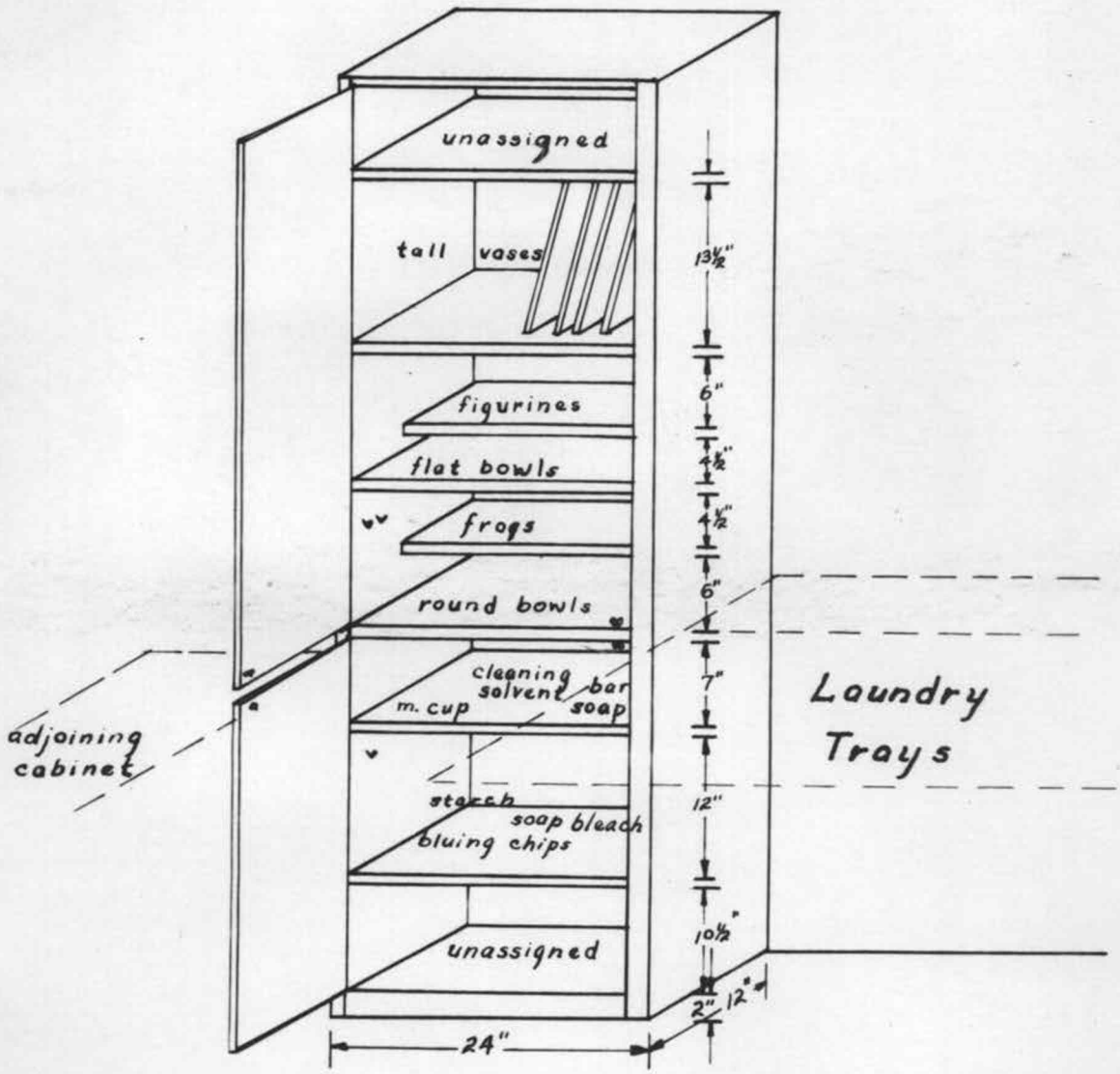
a. string
b. hammer
c. pliers
d screw driver
e. unassigned
f. unassigned

Scale: 1" = 1'-0"

Cabinet "C" in Laundry

Scale: ¾" = 1'-0"

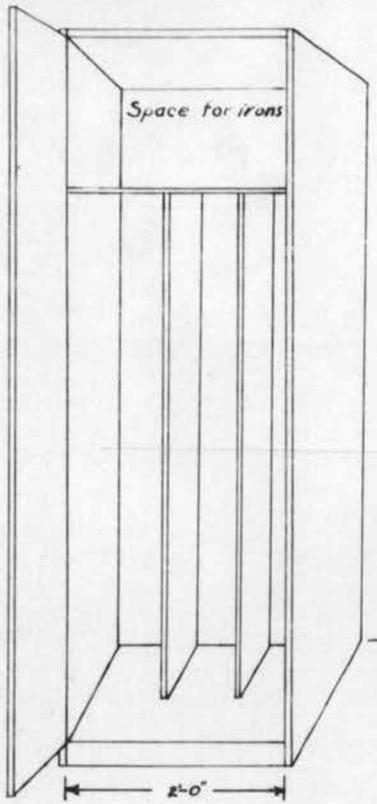
PLATE - 12



Cabinet D in Laundry

Scale 3/4" - 1'-0"

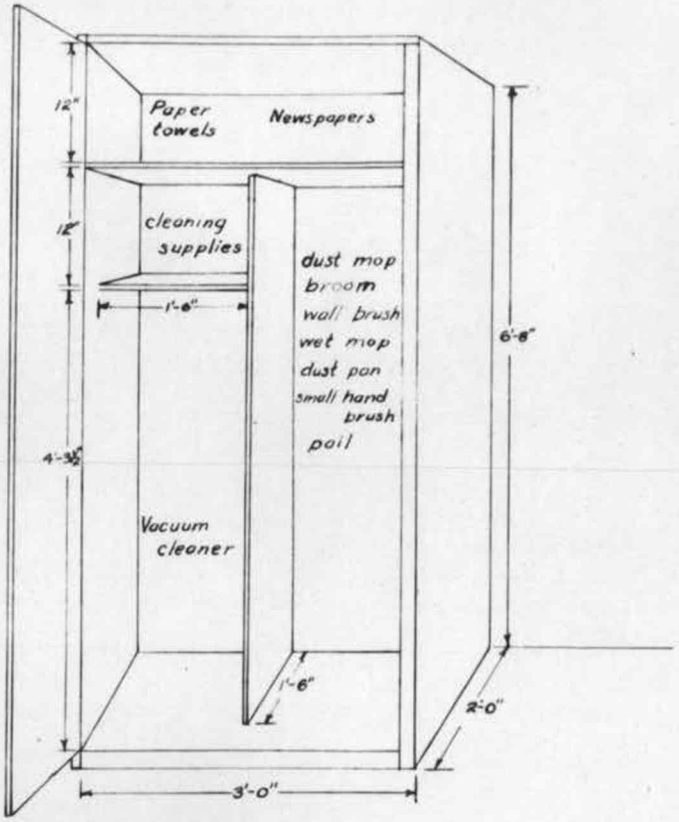
PLATE-13



IRONING BOARD CLOSET

Figure - A

Space for dryer



CLEANING CLOSET

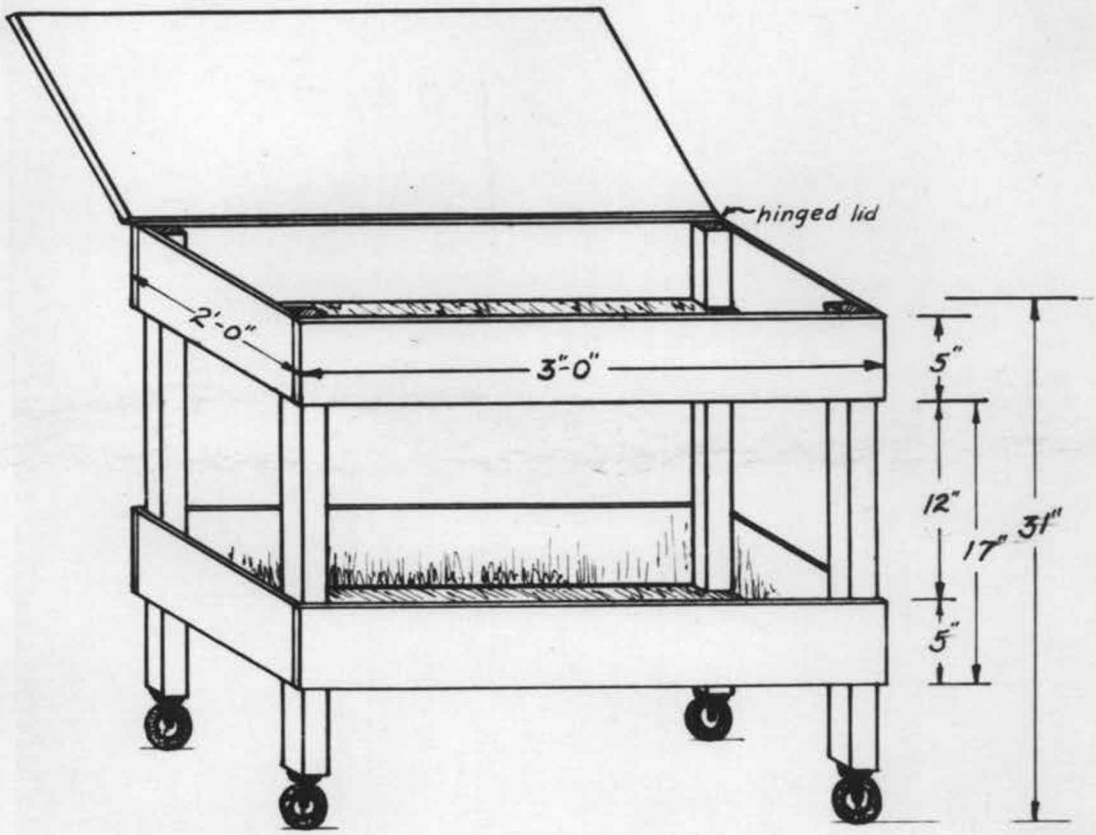
Figure - B

STORAGE FACILITIES on NORTHWALL

LAUNDRY

Scale: ¾" = 1'-0"

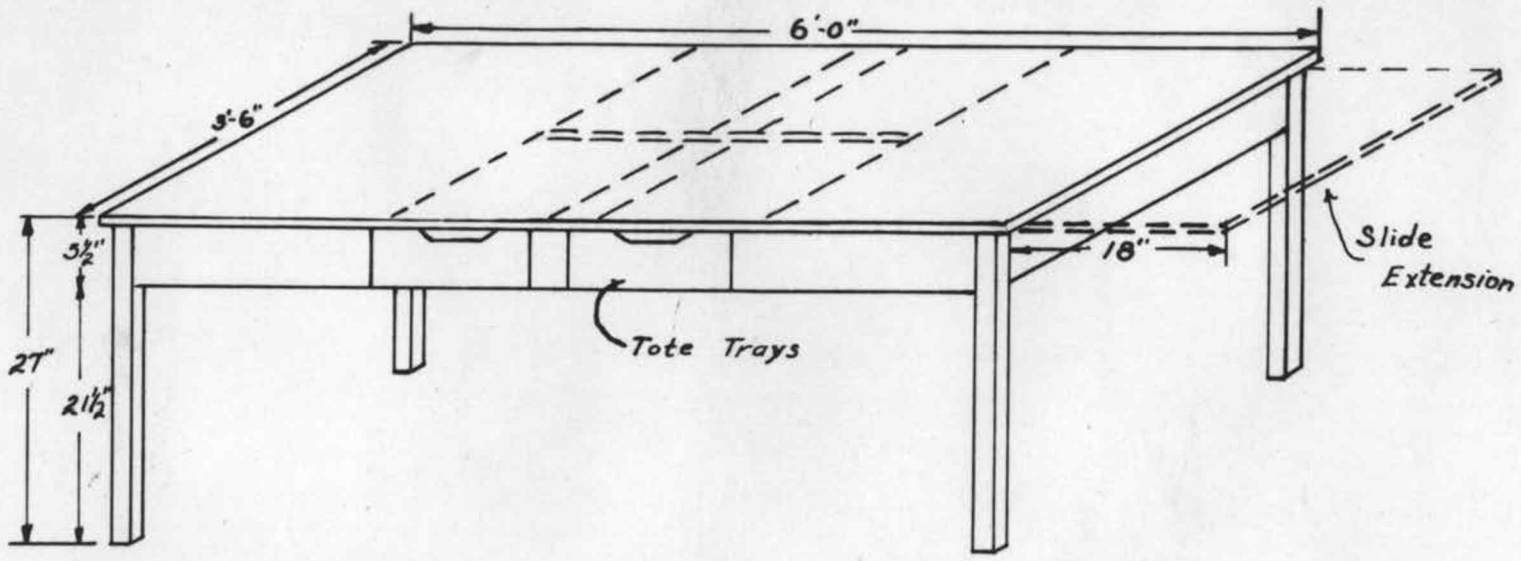
PLATE - 14



Laundry Service Table

Scale: 1"=1'-0"

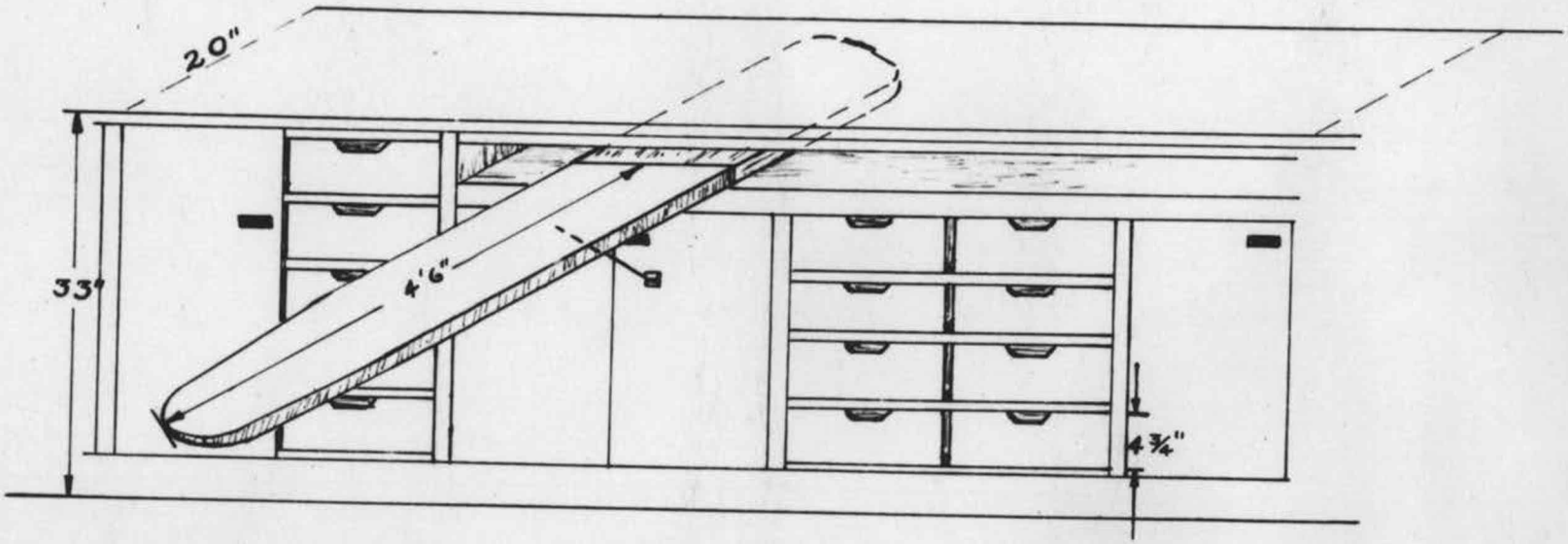
PLATE - 15



SEWING TABLE

Scale: ¾" = 1'-0"

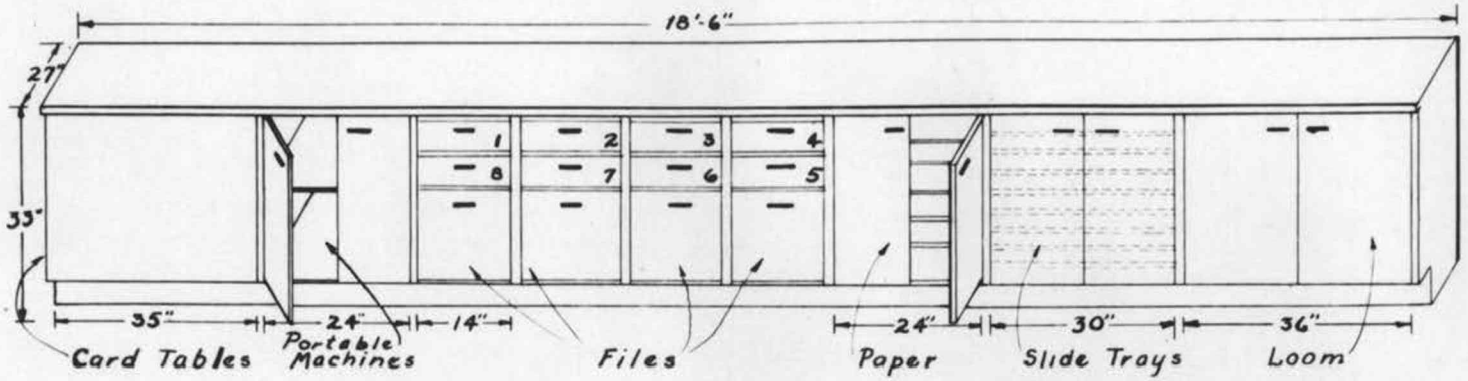
PLATE - 16

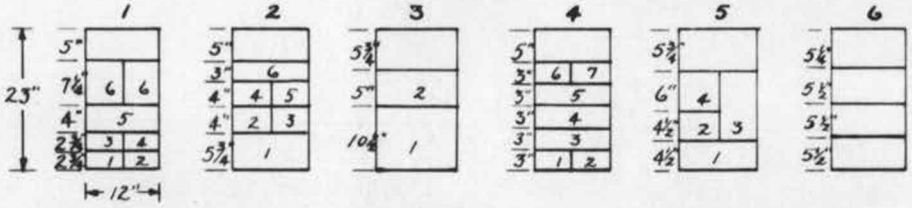


Section of Cabinet Showing Tote Trays and Swivel Ironing Board

Scale ¾"=1'-0"

PLATE - 17



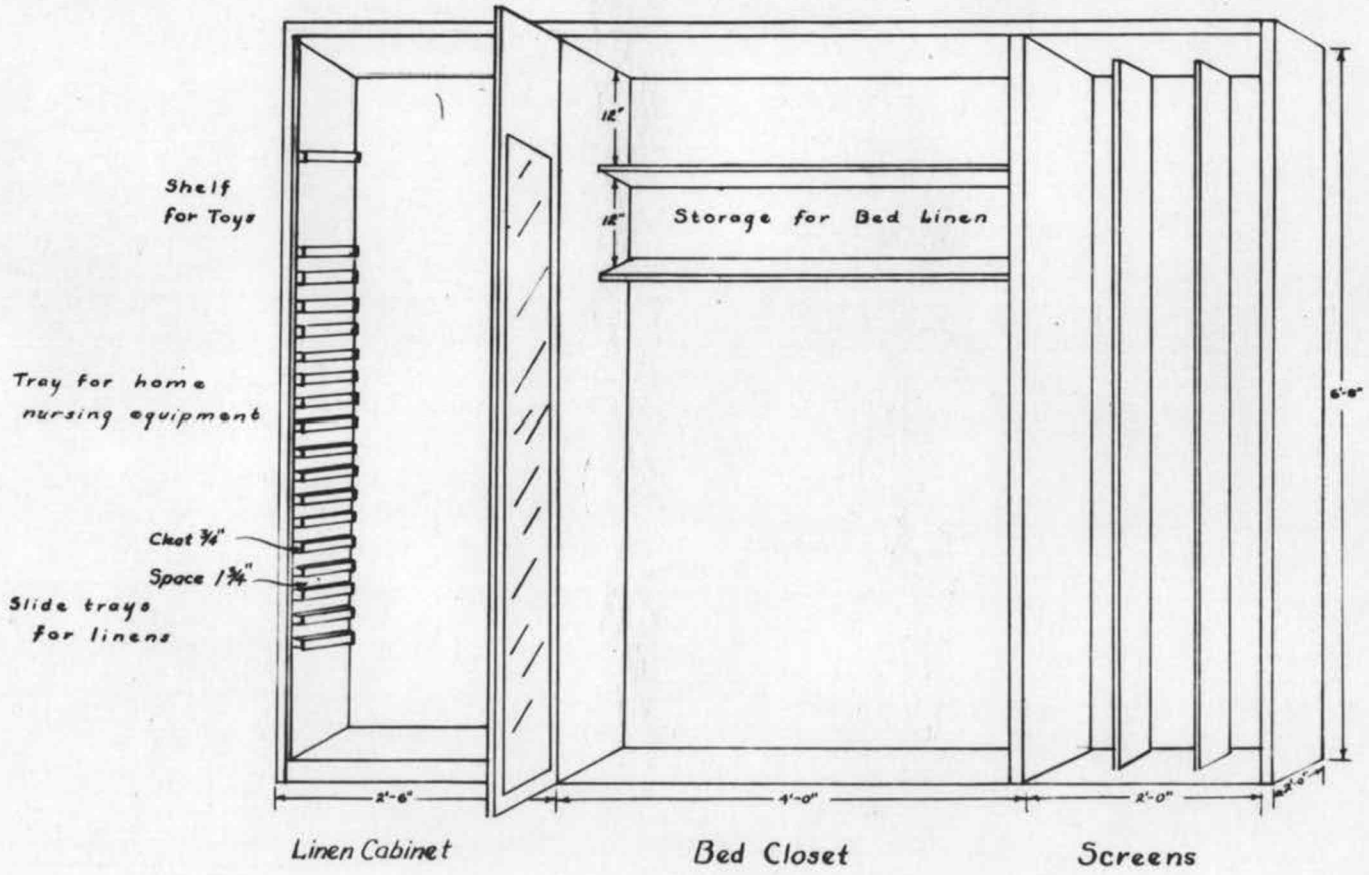


1	2	3	4	5	6
1. needles	1. pin cushions	1. thread	1. pen points	1. rulers	1-4 scraps of material
2. pins	2. bias tape	2. pinking shears	2. clips	2. crayons	
3. tailor's chalk	3. embroidery cotton		3. inks	3. chalk	
4. thimbles	4. hooks and eyes		4. penholders	4. Scotch tape	
5. tape measures	5. snaps		5. pencils		
6. bobbins	6. buttons		6. reinforcements		
			7. erasers		

CABINET - E

Scale: ½" = 1'-0"

PLATE - 18



Cabinet F

Scale 3/4" = 1'-0"

PLATE -19

Plan of Arrangement
for
Living Room

by

Robert Stanton, A.I.A.

CHAPTER VI

SUMMARY AND RECOMMENDATIONS

This study involved the presentation of a plan for the construction and arrangement of a combination homemaking room within an allotted space for the seventh and eighth grade girls of the Walter Colton School, Monterey. The home economics program set up in this community aims to help these girls to find satisfaction in the everyday relationships of life, as many come from homes of limited economic and cultural background.

It was believed that a homemaking unit which permits the practice of routine household tasks and at the same time provides wholesome and attractive surroundings for conducting homemaking classes was a desirable acquisition to the school system.

Before the actual study began, it was necessary to ascertain the homemaking needs of the girls. To this end a study of the home environment was made including occupation of parents, economic status, size of the family, and responsibilities of the girls. Since the majority of the girls come from homes of limited means and most of them marry within the same level, it is essential that they become familiar with the responsibilities of a home of this type.

With this idea in mind, a course was planned to give practical instruction in the essentials of cooking, sewing, laundering, and home management. Accordingly, the arrangement of the room was planned to provide the best possible teaching facilities in an atmosphere and surroundings as nearly like the home as possible. The combination room was chosen because it does provide a homelike environment and at the same time is economical.

Since the objectives were to make the fullest use of the space allowed, activities of the past year were listed as a basis for allotment of unit space for the various subjects. Desirable characteristics of each unit were considered with a view to assigning the unit to a location where these might be available.

Standards of space allowance and working heights as recommended by the related studies (16,28,31) have been used throughout and modified when necessary to fit the particular needs of the situation.

The choice of equipment was based on frequency of use and storage was planned as required for this within each specific area. Storage space was planned with a view to convenience and accessibility to the workers in each unit.

While only practical experience in this room will prove its faults and virtues, it is believed that during the next few years a detailed record of suggested changes should be kept with a view to putting these into effect at some future date. It is believed that such a record would be of greatest value as a supplement to this thesis for other teachers making similar plans in the future.

Further studies which could be made as related to this thesis include:

(1) A study in the Monterey high school of those girls coming from the Walter Colten school as compared with girls from other localities with a view to determining whether there were measurable differences which could be traced to the type of instruction.

(2) Numerous studies using the same procedure and standards in order to plan homemaking rooms for specific situations.

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APPENDIX

A. QUESTIONNAIRE

Present occupation
of father..... Mother..... Your age... Grade...

How many persons live in your house at the present time?
.....

In what way do you receive money for yourself?
..... allowance ..... ask for it as needed
..... earn it

If you earn, in what ways do you earn money?
..... caring for children
..... housework for others
..... work in fruit in summer
..... work in cannery

Is your father employed Regularly.... Occasionally....

Is your mother employed Regularly.... Occasionally....

Check the following activities which you do

	Regularly	Occasionally
Make your bed	....	....
Put bedroom in order	....	....
Clean bedroom	....	....
Put other rooms in order	....	....
Clean bathroom	....	....
Clean kitchen	....	....
Clean living room	....	....
Do family washing	....	....
Assist with family washing	....	....
Do family ironing	....	....
Assist with family ironing	....	....
Do you make		
puddings	....	....
biscuits	....	....
muffins	....	....
pie	....	....
candy	....	....
salads	....	....
cakes and cookies	....	....
soup	....	....

	Regularly	Occasionally
Do you		
cook meat	....	....
cook eggs	....	....
cook vegetables	....	....
prepare fruit	....	....
cook fish	....	....
Are you ever responsible for the preparation of the entire meal?	....	....
Do you		
wash dishes	....	....
dry dishes	....	....
put away dishes	....	....
Do you mend your own		
stockings	....	....
underwear	....	....
dresses	....	....
Do you help with the family sewing?	....	....

B. CHECK LIST OF ACTIVITIES

I. Preparation and Service of Food

1. Activities

- planning of meals
- receiving and storing of food
- preparing food
- serving meals
  - family group of four
  - guest meals
- dishwashing and cleaning of equipment

2. Storage

- perishable foods
- bulk and packaged staples
- canned goods
- equipment ordinarily used in preparation of meals
- equipment not ordinarily used in preparation of meals
- kitchen linen
- aprons
- china and silver for family meals, and for guest meals
- table linen
- extra supplies as candles, table decorations
- illustrative material
- guest wraps

II. Clothing Construction

1. Activities

- use and care of treadle and electric machine
- selection of materials and patterns
- construction practice in fundamental processes
- pressing
- fitting of garments under construction
- mending

2. Storage

- garments partially finished
- girls individual sewing equipment
- small sewing equipment
- portable sewing machines
- equipment necessary for pressing
- patterns
- skirt hanger
- illustrative material of various types

III. Personal Grooming

1. Activities

- shampooing of hair
- manicuring
- shining shoes
- pressing of clothes
- mending of clothes

2. Storage

- towels and soap
- shampoo cape
- equipment for shoe cleaning
- equipment for pressing
- equipment for mending
- high stool

IV. Laundering

1. Activities

- removing of stains
- washing of household linens and personal clothing
- ironing
- dampening clothes
- airing of ironed clothes

2. Storage

- equipment for stain removal
- washing equipment and supplies
- ironing equipment, sleeve board, irons, etc.

V. Care of Own Room

1. Activities

- making a bed
- refinishing furniture
- making of articles for room

2. Storage

- bed
- bed linens
- materials needed for refinishing furniture
- equipment for sewing
- illustrative material

VI. Enjoying Younger Children

1. Activities

- visit to nursery
- caring for children during P.T.A. meetings
- sewing projects
    - for nursery
    - for kindergarten and primary grades

2. Storage

- equipment for sewing
- toys

VII. Study and Discussions

1. Activities

- study
- planning
- group conferences
- class discussions

2. Storage

- books
- magazines
- materials for written work
- girl's individual record books
- movable blackboard
- illustrative materials of various types

VIII. Maintenance of the Room

1. Activities

   - cleaning of room
   - arranging flowers
   - disposal of waste

2. Storage

   - cleaning equipment
   - of vases, frogs, etc.
   - equipment for minor repairs as hammer, oil can, pliers, screw driver, etc.

C. OUTLINE OF SUGGESTED LESSONS

I. List of Suggested Lessons for Foods and Quantities Prepared

Suggested Lessons	1 for 4+	2 for 2
1. Citrus fruit and toast		*
2. Muffins and cocoa	*	*
3. Applesauce and muffins	*	
4. Cereal and fruit		*
5. Cooked eggs, toast, cocoa	*	
6. Omelet, bacon and muffins	*	*
7. Breakfast	*	
8. Cream soups and baking powder biscuits	*	*
9. Soup, salad, and biscuits	*	
10. Fruit and soft custard	*	*
11. Buttered vegetables, baked potatoes, meat loaf	*	
12. Casserole dish, salad, pudding	*	
13. Small cakes, sandwiches, tea	*	*
14. Pie		*
15. Dinner	*	
16. Picnic lunch	*	

+ One recipe prepared for 4 girls

II. Lessons in Laundering

1. Study of laundry equipment and getting acquainted with laundry room
2. Laundering of towels, household linens.
   Use of bleach, water softener, and soaps
3. Removing of spots
4. Laundering of cooking outfits
   Making of starch
5. Mending
6. Testing of materials
7. Hand washing of rayons
8. Laundering of cotton dress
9. Washing a wool sweater
10. Pressing wool dress or skirt
11. Special problem in children clothes
12. Care of equipment
    How to make a well padded ironing board
13. Planning a demonstration—group activity

III. Lessons in Connection with Unit of Work in Clothing Construction

1. Tools needed for sewing
2. Use of sewing machine
3. Planning and construction of cooking outfit

   Making pattern for apron
   Selecting material for apron
   Construction problems in connection with apron
   Hand hem a hand towel
   Making of a dish towel
   Making a pot holder

4. Problems involved in the making of a simple dress

   Selection of pattern and material
   Use of pattern
   Construction problems
   Care of materials
   Clothing budget

IV. Lessons in Connection with Personal Grooming

1. Improving general appearance

2. Care of hair
   Give a shampoo

3. Care of hands
   Give a manicure

4. Care of clothes
   Mending problems

5. Well chosen costume

6. Effect of diet on personal appearance

V. Lessons in Connection with Unit of Work "Care of Girl's Room"

1. Making of a bed

2. Arrangement of furniture

3. Making the most of the clothes closet

4. Daily and weekly care of the room

5. Making some project for own room

VI. Lessons in Connection with Unit of Work "Enjoyment of Younger Children"

1. Reason for sharing children's care

2. Ways in which we can help mother care for younger brothers and sisters

3. Good food habits

4. Games and activities for younger children

D. SPECIFICATIONS FOR LOCATION OF ACTIVITY AREAS

Area	Location	Evaluation[1]
Living room	Direct access to outside	**
	Adjacent to food area	**
	Possible to segregate from other areas	*
	Windows	**
Food area	Window in each unit	**
	Adjacent to laundry	*
	Adjacent to social center	**
	Adjoining space for meal service for family	***
	Wall space for storage	***
	Outside wall for plumbing	***
	Near delivery entrance	***
Clothing area	Plenty of light	***
	Adjacent to laundry area	*
	Storage space for unfinished garments, individual sewing equipment and sewing materials	***
Laundry area	Proper ventilation	***
	Adjacent to clothing area	*

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1 * desirable
** highly desirable
*** necessary

E. DIMENSIONS USED FOR DETERMINING HEIGHT AND SPACE REQUIREMENTS

I. Heights of Work Surfaces

In addition to adequate space requirement for various activities, it is necessary to consider suitable height for working surfaces. The heights of 152 girls who were in school during the complete year were ascertained with a view to determine to what extent growth increased during this period. The growth of these girls as well as a comparison with measurements reported in other studies pertaining to height is shown in Table I.

Table I

Comparison of Heights of the Monterey Girls with Related Studies

	Seventh and eighth grade girls, Monterey, Sept., 1941		Seventh and eighth grade girls, Monterey, May, 1941		Ninth and twelfth grade girls studied by Anderson[1]		High School girls studied by Stayton[2]	
Inches	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
49	1	.6						
50			1	.6				
51								
52	1	.6						
53			1	.6				
54	2	1.3						
55	1	.6	2	1.3				
56	9	5.9						
57	9	5.9	3	2.0				
58	13	8.4	12	7.8	1	.5	1	1
59	12	7.8	17	11.1	1	.5	3	3
60	33	21.7	14	9.2	6	3.2	3	3
61	18	11.8	31	20.4	11	5.9	12	12
62	18	11.8	20	13.1	19	11.2	12	12
63	21	14.4	25	16.5	33	17.6	19	19
64	7	4.6	9	5.9	21	11.3	18	18
65	3	2.0	12	7.8	24	13.8	17	17
66	2	1.3	2	1.3	26	13.9	8	8

Table I
(Cont'd)

	Seventh and eighth grade girls, Monterey, Sept., 1941		Seventh and eighth grade girls, Monterey, May, 1941		Ninth and twelfth grade girls studied by Anderson		High School girls studied by Stayton	
Inches	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
67	2	1.3	2	1.3	28	15.0	4	4
68			1	.6	10	5.4	3	3
69					6	3.2		
70								
71								
72					1	.5		
Average height	60.32		61.31		64.53		64.45	

[1] Dimension Standards for a High School Foods Laboratory. Unpublished thesis, Doris Anderson, Oregon State College, 1942.

[2] Heights for High School Clothing Laboratory Tables Based on Measurements of One Hundred Girls. Unpublished thesis, Mary E. Stayton, Oregon State College, 1939.

It will be seen that in September the average height was 60.32 inches and in May 61.31 inches, indicating an increase in growth of 1.01 inches during the school year.

By comparison of the data as presented in the thesis "Dimension Standards for a High School Foods Laboratory" by Doris Anderson with the measurement of the seventh and eighth grade girls it was possible to adapt the recommendations of that study to meet the requirements of the Monterey girls.

II. Dimensions of Utensils, China, Silver and Linen to be Stored in the Unit Kitchen

Number required	Size	Article	Dimensions in inches	Storage center
2	1 qt	double boiler	8 x 14 x 8 1/4	mixing stove
1	2 qt	double boiler	8 x 14 x 8 1/4	stove
1	10"	frying pan	10 1/4 x 16 x 3	stove
1	1 pt	sauce pan	6 1/4 x 11 1/4 x 4 5/8	stove
1	9x9x2	baking pan	9 x 9 x 2	mixing
1	8-cup	muffin tin	13 3/4 x 7 x 1 1/8	mixing
2	11x11	cake rack	11 x 11 x 3/4 (2)	stove
2	6"	pie tins	6 x 6 x 2	mixing
4	1/2 c	custard cups	3 1/4 x 3 1/4 x 2 1/4	mixing
1	1 1/2 qt	casserole	9 x 7 3/4 x 5 1/4	mixing
1	1 pt	mixing bowl	5 x 5 x 3 1/2	mixing
2	1 qt	mixing bowl	7 x 7 x 3 3/8	mixing
2	1 qt	mixing bowl	9 x 9 x 4 1/4	mixing
1	2 1/4 c	flour sifter	3 7/8 x 6 1/2 x 4 3/4	mixing
2		rotary egg beater	12 x 4 1/2 x 3	mixing stove
1	10"	rolling pin	17 x 2 1/2 x 2 1/2	mixing
1	2"	cookie cutter	2 x 2 x 2 1/4	mixing
1	2 1/2 c	flour sifter	5 1/4 x 4 x 1 1/2	mixing
2	set	metal measuring cups	4 1/4 x 3 1/2 x 3	mixing stove
2	1 c	glass measuring cup	5 x 3 3/4 x 3 5/8	mixing stove
2	med	wooden spoon	14 x 2 x 1	mixing stove
2	2 1/4" blade	spatula	7 x 1 x 3/4	mixing
2	4" blade	spatula	11 3/4 x 1 3/4 x 3/4	stove
2		case knife (stainless steel)	9 1/4 x 7/8 x 7/8-3/8	mixing

Number required	Size	Article	Dimensions in inches	Storage center
1		case fork	7 x 7/8 x 7/8	stove
4		tablespoon	8 1/2 x 1 3/4 x 1 3/8	mixing stove
4		teaspoon	6 x 1 1/4 x 1	mixing stove
2	sets	measuring spoons	5 x 1 5/8 x 3/4	mixing stove
2	2 1/2"	paring knife	6 1/2 x 3/4 x 1/2	mixing,stove sink
2	4" blade	slicing knife	7 3/4 x 3/4 x 3/4	mixing,stove
2	sets	measuring spoons	5 x 1 5/8 x 3/4	mixing,stove
1	5"	strainer	12 1/8 x 5 1/4 x 3 1/4	mixing
1		vegetable brush	5 x 1 1/2 x 1 1/2	sink
2	6"	rubber scraper	6 1/2 x 2 1/4 x 3/4	sink
2	13" x 16"	utility trays	13 3/4 x 9 3/4 x 3/4	stove
			1 (2)	mixing
2	qt	dishpans	17 x 11 x 5 (2-7")	sink
1		sink strainer	7 x 7 x 3	sink
1		soap dish	3 3/4 x 2 3/4 x 5/8	sink
1	qt	cannister (flour)	6 x 6 x 7	mixing
1	qt	cannister (sugar	5 x 5 x 6	mixing
2	1 c	shaker (salt)	3 x 3 x 5	mixing,stove
8		dish cloths	7 x 7	drawer
8		dish towels	30 x 30	drawer
1		garbage can	14 x 14 x 18	sink
6		fruit dishes	5 3/8 x 5 3/8 x 2 1/8 (4)	
6		cereal bowls	6 1/2 x 6 1/4 x 3 (4)	
6		luncheon plates	8 1/4 x 8 1/4 x 2 (4)	
6		bread and butter plates	6 1/4 x 6 1/4 x 1 7/8 (4)	
6		salad plates	7 x 7 x 2 (4)	
1		vegetable bowl	9 1/2 x 7 1/8 (1)	
1		platter	13 1/4 x 10 1/2 x 1 1/4	
6		cups	6 x 6 x 3 1/2 (2)	

Number required	Size	Article	Dimensions in inches	Storage center
6		saucers	6 x 6 x 1 3/4 (4)	
1		creamer	6 x 5 x 3 1/4	
1		sugarbowl	7 x 5 x 4	
1 pair		salt and pepper shakers	2 x 2 x 2 1/2	
6		forks	7 x 7/8 x 7/8 (1)	
6		knives	8 1/2 x 7/8 x 3/8	
12		teaspoons	6 x 1 1/4 x 1	
6		salad forks	7 x 1 1/2 x 1	
6		soup spoons	7 1/2 x 1 1/2 x 1	
2		serving spoons	8 1/2 x 1 3/4 x 1 3/8	
1		serving fork	8 1/2 x 1 1/2 x 1	
6		glasses	3 1/4 x 3 1/4 x 5	
6		fruit juice glasses	2 3/4 x 2 3/4 x 3 1/2	
6		mats	12 x 18	
2		tablecloths	48 x 60	
12		napkins	9 x 9	

III. Dimensions of Additional Cooking Utensils

Number stored	Size	Article	Dimensions in inches
2	7"	frying pan	7 1/4 x 12 x 2 1/2
1	12"	cast iron frying pan	12 1/4 x 12 1/2 x 6
2	1 pt	sauce pans	6 1/4 x 11 1/4 x 4 5/8
4	9"x5"x4"	baking pans	9 1/2 x 5 1/2 x 2 5/8
4	9"	pie tins	9 1/2 x 1 1/2 x 2 1/4 (4)
1	6 qt	steamer	9 1/2 x 12 x 12
4	6-cup	muffin tins	13 3/4 x 7 x 2
2	1 1/2 qt	casseroles	9 x 7 3/4 x 5 1/4
2		orange reamers	8 1/2 x 6 1/2 x 3 1/2
4		lemon reamers	6 1/4 x 6 1/4 x 2 3/4
2	set	graters	9 x 4 1/2 x 1 3/4
2		graters	4 5/8 x 3 1/4 x 9
8		cookie sheets	15 x 12 x 3/4
1	2 qt	colander	11 x 11 x 5 1/4
1	3 qt	double boiler	9 x 14 x 9
2	1 qt	jello ring molds	8 3/4 x 8 3/4 x 3
1	10"	metal fork	10 x 1 x 1
1	11"	metal spoon	11 x 2 1/2 x 1 3/4
1	11"	metal split spoon	11 x 2 1/2 x 1 3/4
2	2/3 c	ladle	12 1/4 x 3 5/8 x 3 1/2
2 doz	1/2 c	jello molds	3 5/8 x 3 5/8 x 3 1/4 (6)
2	3 qt	mixing bowls	10 1/2 x 10 1/2 x 6 (2)
2	2 qt	mixing bowls	9 x 9 x 5 (2)
1	1 qt	flour sifter	7 3/4 x 6 1/2 x 6 1/2
1	8" blade	bread knife	12 1/2 x 1 1/2 x 3/4
1	6" blade	butcher knife	10 1/2 x 1 1/2 x 3/4
1	9" blade	French knife	14 1/2 x 1 3/4 x 3/4
2	4" blade	paring knives	6 1/2 x 3/4 x 1/2
1		grapefruit knife	6 1/2 x 3/4 x 1
1		melon cutter	7 1/2 x 1 1/8 x 3/4

Number stored	Size	Article	Dimensions in inches
1		nut cracker	5 x 1 1/4 x 1/2
1	set	cookie cutters	3 x 4 x 1 1/2
1		potato masher	10 1/4 x 3 x 3 7/8
1		wide spatula	12 x 2 1/2 x 2 1/2
1		can opener	5 3/4 x 7/8 x 1 1/2
1	set	butter spades	10 x 3 x 1
1		wire whisk	10 3/4 x 3 1/4 x 1 1/2
1		candy thermometer	11 3/4 x 1 3/4 x 1
1		meat thermometer	6 x 2 1/2 x 2 1/2
2		pastry brushes	7 x 1 1/2 x 3/4
1	4 qt	teakettle	11 1/2 x 9 x 10
1	2 qt	coffee pot	9 x 12 x 10 1/4
1	No. 2	meat grinder	11 x 10 x 4 1/2
4	1 c	jars	2 x 2 x 4
1		kitchen shears	8 x 3 x 3/4
3	1 qt	sauce pans	8 x 12 x 6 1/2
6	9"	round cake tins	9 x 9 x 1 1/2

IV. Dimensions of China and Glassware for Guest Meals

Number required	Article	Dimensions in inches	Method used in storing
24	dinner plates	10 1/2 x 10 1/2 x 5	2 deep; 12 in stack
24	luncheon plates	9 1/2 x 9 1/2 x 2 1/4	2 deep; 6 in stack
36	salad plates	7 x 7 x 2 1/4	3 deep; 8 in stack
24	bread and butter plates	6 1/4 x6 1/4 x 4	2 deep; 12 in stack
24	soup bowls	8 x 8 x 4	3 deep; 3 in stack
36	cups	5 x 4 x 4	3 deep; 2 in stack
24	saucers	6 x 6 x 3	3 deep; 8 in stack
4	vegetable dishes	8 5/8 x 8 5/8 x 2 3/4	
1	gravy bowl	7 3/8 x 7 3/8 x 4	
2	silver chests	16 1/2 x 12 x 14	
24	soup bowls	8 x 8 x 4	3 deep; 3 in stack
2	platters	13 1/4 x 10 1/2 x 1 1/4 15 1/2 x 12 x 1 3/8	
2	creamers	6 x 5 x 3 1/4	
2	sugarbowls	7 x 5 x 4	
4 sets	salt and pepper shakers	1 1/2 x 1 1/2 x 2 (1)	
24	glasses, goblets	3 3/4 x 3 3/4 x 7	4 deep
24	cocktail glasses	2 x 2 x 2 1/2	6 deep
2	water pitchers	6 1/2 x 7 1/2 x 8	
24	sherbets	3 3/8 x 3 3/8 x 4 3/8	
2	teapots	10 x 7 x 6	2 deep
2	coffee urns	6 x 7 x 9 1/2	
4	trays for sandwiches	round - 12 x 14	
2	serving trays	12 x 15 12" round	

V. Amount of Staples Purchased and Space Required

Staples	Amount purchased 1938 1939	1939 1940	1940 1941	1941 1942	Estimated amount to be purchased at one time	Dimensions in inches
Cocoa	4 lb	2 lb	3 lb	1 lb	1 lb can	6 3/4 x 3 5/8 x 3/4
Chocolate	2 lb	2 lb	2 lb	4 lb	1 lb	6 3/4 x 3 1/2 x 1
Coffee	2 lb	2 lb	3 lb	2 lb	1 lb can	3 3/4 x 5 x 5
Tea	1 lb	1 lb	1 lb	1 1/2 lb	1 box 20 teaballs	5 1/2 x 3 1/2 x 1 1/2
Canned Goods						
No. 1	13	5	5	6	2 cans	3 5/8 x 2
No. 2	31	20	10	37	3 cans	3 1/4 x 4 1/4
No. 2 1/2	10	6	12	18	3 cans	3 1/2 x 4
No. 3	1		3	3	1 can	4 x 4 3/4
Cornflakes	1 box	2 box	1 box	2 box	1 box	8 7/8 x 12 1/4 x 2 1/2
Rice	4 lb	5 lb	6 lb	4 lb	2 lb	6 x 4 x 2 3/8
Oatmeal		1 lb		1 lb	1 lb 4 oz	7 3/8 x 4 x 2 3/8
Macaroni	2 lb	4 lb	2 lb	2 lb	1 lb 4 oz	9 1/2 x 4 x 3 1/4
Spaghetti	3 lb	4 lb	4 lb	6 lb	2 lb	5 1/2 x 5 1/2 x 3
Cornstarch	4 lb	3 lb	5 lb	4 lb	2 lb	6 x 3 1/2 x 1 7/8
Tapioca	1 lb	2 lb	1 lb	2 lb	1 lb	6 x 4 x 1 7/8
Dates	1 lb 10oz	1 lb	1 lb	2 lb	1 lb	6 x 4 x 1 3/4
Figs			2 1/4 lb			4 x 6 x 1 1/2
Prunes		2 lb	2 lb	1 lb	1 lb	5 3/4 x 4 x 2
Raisins	3 lb	1 lb	4 lb	2 lb	1 lb	5 3/4 x 4 x 1 3/4
Fats	25 lb	32 lb	30 lb	24 lb	6 lb can	6 1/2 x 6 1/2 x 8
Oil			1 pt	1 qt	1/2 pt	2 x 2 x 4
Vanilla	16 oz	16 oz	24 oz	20 oz	4 oz	7 x 2 1/2 x 1 3/4
Almond	1 oz		1 oz		1 oz	4 x 1 3/4 x 1
Peppermint				1 oz	2 oz	5 1/4 x 2 x 1
Lemon	8 oz				2 oz	5 1/4 x 2 x 1

Staples	Amount purchased 1938 1939	1939 1940	1940 1941	1941 1942	Estimated amount to be purchased at one time	Dimensions in inches
Blended flour	60 lb	70 lb	65 lb	75 lb	50 lb	bin capacity
Wholewheat flour	5 lb	5 lb	10 lb	10 lb	5 lb	cannister 8 x 8 x 12
Cake flour	3 lb	10 lb	20 lb	8 lb	2 lb	cannister 6 x 6 x 9
Cornmeal	1 lb		2 lb		1 lb	jar 5 x 5 x 10
Gelatine	2 pkg	1 pkg	1 pkg	2 pkg	1 pkg	3 1/2 x 2 x 3/4
Baking powder	2 lb	2 lb	2 lb	3 lb	1/2 lb	3 1/4 x 3 1/4 x 5
Soda			2 lb	3 lb	1 lb	3 1/2 x 2 x 4 1/2
Nutmeg	1-4oz		1-4oz		4 oz	2 7/8 x 1 3/4 x 3 3/4
Pepper	1		1		4 oz	2 7/8 x 1 3/4 x 3 3/4
Salt	8 lb	6 lb	8 lb	6 lb	2 lb	5 1/2 x 3 1/4 x 3 1/4
Paprika	1		1	1	1	1 1/2 x 1 1/2 x 2 1/2
Chili powder	1			1	1	1 3/4 x 1 3/4 x 6
Cinnamon	1-4oz	1		1-4oz	4 oz	2 7/8 x 1 3/4 x 3 3/4
Bay leaf	1 box		1 box		1 box	1 1/2 x 1 1/2 x 5
Granulated sugar	90 lb	75 lb	80 lb	80 lb	25 lb	bin 13 x 10
Brown sugar	6 lb	4 lb	2 lb	8 lb	4 lb	cannister
Powdered sugar	1 lb		1 lb	2 lb	1 lb	4 x 2 x 6 1/2
Cube sugar	2 lb	3 lb	1 lb	1 lb	1 lb	4 x 2 x 6 1/2
Corn syrup	2	2	3	4	1 lb 8 oz	2 3/4 x 2 3/4 x 7
Vinegar	1 qt		1 qt		1 qt	4 x 4 x 12
Cocoanut	3 lb	3 lb	2 lb	2 lb	1 lb	can 4 x 4 x 7
Walnuts	5 lb	3 lb	2 lb	3 lb	1 lb	can 4 x 4 x 7

VI. Determination of Size of Tote Trays

Sizes of boxes used to determine size of tote tray

12" x 17" x 3"
15" x 24" x 4"
12" x 22" x 3 1/2"
12" x 15" x 4"
10" x 14" x 3"
10" x 14" x 2 1/2"
14" x 18" x 3 1/2"

List of materials stored

Sewing equipment—scissors, tapemeasure, box pins, pkg needles, pin cushion, tailor's chalk, thimble and

(1) Yardage as purchased
(2) Pattern laid on material and cut
(3) Dress partially basted
(4) Apron cut
(5) Apron almost completed and work started on potholder and towel

VII. Dimensions of Space Requirements for Storage of Sewing Equipment

Number	Kind	Space required in inches	Assignment
6 doz	bobbins	5 x 5 x 1	drawer
6 pkg	needles (machine)	2 x 2 1/2 x 1 1/2	drawer
1	tracing wheel	6 x 1 x 1 1/2	drawer
6 pkg	needles	2 x 2 1/2 x 1 1/2	drawer
1 box	pins	4 1/4 x 3 x 1	drawer
6 pieces	tailor's chalk	2 x 2 x 2	drawer
8	tapemeasures	4 x 4 1/2 x 1 1/2	drawer
6	thimbles	2 1/2 x 1 1/2 x 1	drawer
2	pin cushions	4 x 6 x 2 1/2	drawer
2 pairs	pinking shears	10 x 3 1/2 x 2 1/2	drawer
24 pairs	scissors		
24 spools	thread	16 x 8 x 2 1/2	board
2	yardsticks	36 x 1 1/2 x 3/8	hung in closet
1	skirt hanger	36 x 5 x 5	hung in closet
2 cards	snaps	4 1/4 x 3 x 1	drawer
2 cards	hooks and eyes	5 x 3 x 1	drawer
odd collection	buttons	6 x 3 x 1	drawer
6 cards	bias tape	5 x 3 x 1	drawer
6 skeins	embroidery cotton	6 x 2 x 1	drawer
10 yd (max)	muslin		
	extra scraps of material	18 x 12 x 5	
2	whisk brooms	9 x 5 x 1	drawer
1	sleeve board	27 x 5 1/2 x 4 1/2	shelf-closet
2	irons	8 x 6 x 7	cabinet
2	press cloths	6 x 9' x 3	drawer
2	portable machines	13 x 8 x 11	cabinet
1	portable loom	3' x 2' x 32	cabinet

VIII. Dimensions of Equipment to be Stored in Laundry Area

Number	Article	Maximum measurement in inches	Assignment
	Removing stains		
6	blotters	6 x 3 x 3/4	Drawer
2 yd	cheesecloth	7 x 5 x 1 1/2	Drawer
1	scissors	8 x 3 x 3/4	Drawer
3	spot removers	3 x 3 x 5	Cupboard
1	glass dropper and rod	4 x 3/8 x 3/8	Drawer
	Washing		
1	clothes stick	36	Hang next to tub
	soap		Cupboard
	(box)	8 1/4 x 3 1/4 x 10	
	(bar)(6)	4 1/2 x 2 3/4 x 10 3/4	
1	bluing	4 1/4 x 4 1/4 x 8	Cupboard
1	bleach	4 3/4 x 4 3/4 x 10 3/4	Cupboard
	Starching		
1	pan	11 1/2 x 11 1/2 x 3 1/2	Shelf
1	spoon	14 x 2 x 1	Cupboard
3	starch	3 1/2 x 1 3/4 x 6	Cupboard
1	measuring cup	5 x 3 3/4 x 3 5/8	Cupboard
1	teakettle	11 1/2 x 9 x 10	Shelf
	Sprinkling		
1	sprinkler	3 x 3 x 8	Shelf
1	bowl	7 x 7 x 4 1/4	Shelf
1	brush	8 x 3 x 1 3/4	Drawer

Number	Article	Maximum measurement in inches	Assignment
	Ironing		
2	ironing boards	62 x 5; 55 x 3 1/2 x 20	Ironing board closet
6	covers	72 x 4 x 1 (1)	Drawer
2	press cloth		Drawer
1	sleeve board	27 x 5 1/2 x 4 1/2	Ironing board closet
2	irons	8 x 6 x 7	Ironing board closet
2	drying racks	18 x 5 x 3	Wall
2	bowls	7 x 7 x 4 1/4	Shelf
	Storage		
6	boxes	15 x 10 x 3	Shelf
1 roll	paper		Counter
	Flower bowls		
2	tall vases	3 x 3 x 9	Cupboard
4	round platters	15 x 15 x 3	Cupboard
2	oval	12 x 7 x 3	Cupboard
4	round bowls	8 x 8x5	Cupboard
12	figurines		Cupboard
8	frogs	3 x 3 x 3	Cupboard
1 pair	clippers	8 x 5 x 3/4	Cupboard
	Auxiliary equipment		
	string		Drawer B
1	hammer		Drawer B
1	pliers	7 x 2 1/2 x 3/4	Drawer B
1	screwdriver	9 x 1 1/4 x 1 1/4	Drawer B

Number	Article	Maximum measurement in inches	Assignment
	Grooming		
2	shoe polish		Cupboard
1	brush		Cupboard
4	bath towels		Drawer

IX. Dimensions of Equipment to be Stored in Cleaning Closet

Vacuum cleaner	49" high, 16" wide, 14" deep; hose 9' long
Dust mop	61" long, mop end 9" wide
Wall brush	60" long, 10" wide, 3" deep
Broom	54" long, 14" wide, 2" thick
Wet mop	57" long, mop end 7" wide
Dust pan	34" long, 13 1/2" wide, 3" deep
Pail	13" diameter, 10 1/2" high
Small hand brush	4" diameter, 16" long
Tray for cleaning supplies	15" x 12" x 3"
Furniture polish	2" x 4" x 6"
Furniture cleanser	5" x 5" x 5"
Furniture wax	3" x 3" x 5"
Windex	4" x 2 1/2" x 7"
Paper towels	12" x 4" x 5 1/2"

X. Dimensions of Space Requirements for Writing Materials

Number	Kind	Space required
2" 9" x 6"	scratch paper	3" x 12" x 12"
2" 8" x 8"	stitching paper (4 kinds)	3" x 12" x 12"
6 sheets	carbon	1" x 12" x 12"
1 roll	tracing paper	
2" 9" x 12"	notebook paper	3" x 12" x 12"
2 bottles	ink	3" x 4" x 3 1/2"
6	rulers	3" x 13" x 1 1/2"
1 doz	pencils	3" x 13" x 1 1/2"
6	erasers	3" x 1 1/2" x 3"
6	penholders	3" x 13" x 1 1/2"
1 box	penpoints	1" x 1" x 2"
1 box	crayons	3" x 4 1/2" x 1"
1 box	chalk	3" x 4" x 2"
3 stacks	magazines	9" x 12" x 6"

F. STANDARDS USED IN STUDY

I. Dimensions Suited to the Requirements of the Average Girl[1]

Dimensions of tables and cabinets used for laboratory work

Heights	
Working surface	32 1/2"
Rim of double sink or single sink 24" or more in length	37 1/2"
Rim of sink less than 24" long (assume use as catch basin only)	32 1/2"
Pull-out board for beating	30 1/2"
Minimum length of table or counter for girls working side by side	60"

Other cabinet dimensions

Maximum height of shelf for articles in frequent use	
No obstruction	
Shelves for books, light-weight utensils	79"
Shelves for dishes, utensils	74"
12" obstruction	
Shelves for books, light-weight utensils	76"
Shelves for dishes, utensils	71"
Maximum height of shelf visible throughout entire width	60"
Maximum height of top of drawer	58"
Desirable distance between upper and lower cabinets when work surface of the lower cabinet is visible for the entire width	
When work surface is 32 1/2" high	14"
When work surface is 37 1/2" high	11"

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[1]Excerpt from thesis "Dimension Standards for a High School Foods Laboratory" by Doris Anderson

Height of stove	32 1/2"
Width of passages and floor areas	
Minimum body clearance for passage between equipment less than elbow height	16"
Minimum body clearance for passage between cabinets above elbow height	18"
Minimum front-to-back measure, subject in crouching position	22"
Minimum width of passage where one person may be crouching while another is passing	40"
Minimum width for passage where two people may be crouching back-to-back while a third walks between them	60"
Dimensions of table used for eating	
Table height	25"
Width of table allowing for seating on both sides	48"
Maximum thickness of table top	2"
Length of table space:	
One person	30"
Additional persons, each	24"
Minimum distance between table legs	18"
Minimum distance from edge of table to knee obstruction	12"
Dimensions of chair	
Height of front of chair	16"
Minimum width of chair seat	14"
Length of chair seat	16"

Distance of back supports from chair seat:

Bottom of lower support	8 1/2"
Top of lower support	11"
Bottom of upper support	13"
Top of upper support	16"

II. Standards for Floor Space[1]

1. Passageways

Widths

Passage between room doors:

Minimum 2'6" between fixed or hard-to-move objects

Minimum 2'0" if object readily movable

Other passages:

Between object of less than elbow height (unless readily moved) and wall or high object, minimum 1'6"

Exception--kitchen range

Between two objects of less than elbow height, minimum 1'3"

Exception kitchen range

Between 2 objects of more than elbow height, minimum 2'0"

2. Space to Stand While at Work

Minimum front to back 2'3" when object behind is 3' or more high

Minimum side-to-side at elbow height, 2'6"

Minimum side-to-side below elbow height, 2'0"

Maximum length of reach at shoulder height, 2'3"

3. Space Around Chairs

Minimum space to pull chair back to take seat 9"

Minimum between back of occupied chair and wall or high equipment, 1'6"

Minimum between corner of occupied chair and adjacent object, 1'3"

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[1]List of Standards for Planning Problem I: House Suitable for Average Farm Owner in Western Oregon, Maud M. Wilson, (unpublished).

4. Space Between Sides of Fixed Equipment

   Refrigerator, when between two fixed objects, as wall, sink unit, floor-to-ceiling cabinet, 3" (total clearance)

5. Ironing Boards[1]

   Floor space, 14" x 60"
   At least 6" free space at back and 12" at the end of the board

6. Sewing machines[1]

   Closed:
      Floor space, 16" x 34"
      Space in front (to open drawers) min., 1'0"
   Open:
      Floor space, 16" x 46"
      Minimum space in front, 2'3"
        (Occupied chair plus 9" space to pull back)
      Minimum space at left end, 6"
      Minimum space at right end, 1"
      Minimum space at back, 2"

7. Laundry Equipment[2]

   Laundry trays, 24" x 48". Desirable to set out from wall 12" to permit shelf on level with top of trays. End of tray at least 18" from wall or fixed equipment.
   Floor space for washing operation, including trays, 6'0" x 7'0" excluding shelf (measure parallel to trays 7'0")
   Washing machine, stored—2'6" diameter, 3" clearance if stored in confined space
   Shelving for laundry supplies, 3'0" x 8"
   Work table or work counter, 2'3" x 5'0". Easily moved

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[1]Space and Equipment for Homemaking Instruction. U.S. Dept. of Interior, Bulletin No. 181, 1935.

[2]List of Standards for Planning Problem I: House Suitable for Average Farm Owner in Western Oregon, Maud M. Wilson (unpublished).

III. Suggestions for Utilizing Storage Space[1]

Frequently used articles should be stored so that they may be reached without having to climb or crouch.

Articles should be stored so that they may be removed without moving others, unless they are seldom used, or are duplicates.

Hooks should be provided for articles that can be hung if hanging space is readily accessible. This space will hold many more articles if the location of each hook is planned with reference to its intended use.

Containers that cannot be hung may be kept on shelves in single rows.

Small utensils that cannot be hung may be kept in sectioned shallow drawers.

Flat articles, such as pie and cake tins, may be stored in slots formed by partioning the space between shelves. Tilt base slightly so that pieces will not roll forward. By means of small blocks adjust the size of inset to fit each piece. Shape plywood dividers so that articles can be easily removed.

Racks of leather or plywood are used for knives.

Mixing bowls should be stacked only if they are the same size or if they are to be used at the same time.

In arranging equipment in sectioned drawers, place those used most often toward front.

Sections running parallel to drawer front are usually easier for handling small pieces with exception of knife section which may run at right angles to the front.

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[1]Closet and Other Storage Arrangements for Farm Homes. Maud Wilson. United States Department of Agriculture. Bureau of Home Economics, 1934 p. 24.

IV. Construction of Storage Facilities[1]

Shelves should be readily removable and adjustable as to distance apart.

An upper cabinet should be no deeper than necessary to accommodate the largest articles in a single row.

Movable trays are better than shelves in compartments below work counters. They should be 4" narrower than the compartment itself, to allow spaces for articles hung or placed in racks on the door.

Minimum width of any section within drawer 2 1/2".

For sectioned drawers use insets made of 1/4" plywood with two handles for removing.

Inside of drawer usually measures1" less than outside measurements.

Allow 1/8" to 1/4" for clearance of drawer opening.

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[1]Closet and Other Storage Arrangements for Farm Home. Maud M. Wilson. United States Department of Agriculture. Bureau of Home Economics, 1934, p. 24.

V. Standards Pertaining to Food Area

1. Cutlery[1]

Storing knives in a rack preserves the cutting edge and helps them to be found easily when needed.

Use of knife rack in drawer
1/8" slit for knives
1/4" for meat cleaver

2. Dishes[2]

Plates are stacked by sizes one row to a shelf.
Cups may be stacked in twos.
Glasses are not stacked but may be inverted.
Stack serving dishes that are used together.[2]

Plates, cereal bowls, sauce dishes and saucers in piles of not more than 12.

Allow sufficient shelf space to permit removing any one type of dish without removing other.

Shelf room for flared dishes, such as sherbet dishes, may be conserved by turning alternate dishes upside down.

Individual compartments are best for large platters, chop plates, and serving trays.

In estimating the distances between shelves, allow 2" above dishes that are handled from the top; allow 1" above those that are handled from the side.

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[1]Unpublished material. Conference with Maud M. Wilson, Oregon State College, Corvallis, March 30, 1942.

[2]Mimeograph. Bureau of Home Economics, U.S.D.A. Closets and Other Storage Arrangements for the Farm Home. Maud M. Wilson, 1934, pp 30-31.

3. Silver[1]

The dimensions for storage of silver are as follows:

Knives	4" x 11"
Forks, tablespoons, dessert spoons	3"x 9"
Teaspoons, salad forks, boullion spoons, butter spreaders	3" x 7"
Single pieces will hold 3 to 6	3" x 10"
Single pieces common types	
Gravy ladle	2 1/2" x 7"
Pie server	2 1/2x10 1/2"
Cold meat fork	1 1/2 x 8 1/2"
Berry spoon	3" x 9"
Box containing carving set	6" x 17"
Depth of drawer or tray	3"
Minimum width of section, for freedom in hand action	2 1/2"
Space at back of drawer suitable for seldom-used articles only	6"

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[1]Mimeograph. Bureau of Home Economics U.S.D.A. Closets and Other Storage Arrangements for the Farm Home. Maud M. Wilson, 1934, p. 31.

4. Food Storage[1]

To estimate the distance between shelves, add 2" to the height of small containers and 8" to those too heavy to move easily.

Use 12" board for shelves for small containers.

Shelves should be movable and adjustable as to distance apart.

Spices may be stored on stepped levels.

Bins should be placed on gliders.

Allow a 2" margin for handling packaged groceries.

Store flour, sugar, oatmeal, etc. in bins; coffee and tea in tightly closed receptacles; bread and cake in ventilated metal containers; cookies, crackers, and ready-to-eat cereals in tightly closed, moisture-proof containers.

Drawers may be used advantageously as bins. Larger drawers with movable metal insets are preferable to small drawers for supplies stored in less than 25 lb. lots.

VI. Standards for Clothing Area[2]

Garments of adults, general use 63"
(Distance between floor and top of rod or wardrobe hook, assuming hanger places top of garment 4" from top of rod)

Distance between top of rod and bottom of shelf above it 2 1/2"

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[1]Mimeograph. Bureau of Home Economics, U.S.D.A. Closet and Other Storage Arrangements for the Farm Home. Maud M. Wilson, 1934, p. 6

[2]Ibid, pp 24, 28, 29.

VII. Cleaning Closet[1]

In arriving at the minimum dimensions of a cleaning closet and in deciding on its arrangement, the following standards and practices of storing equipment and supplies were assumed:

Any article can be removed without taking out another article.

Each article hung should have space enough to hang free.

Dirty and wet articles are grouped together.

The wet mop should not be stored in the same compartment with the electric sweeper.

All brushes, brooms, and mops are provided with hooks or rings at the ends of handles so they can be hung. The oiled mop may be stored with the mop part in a can. The wet mop is suspended over the bucket which stands on the floor. The broom and dust mop are hung where they are easily accessible.

The dustpan is hung so that the front edge will not be dented or jammed and so that it is readily accessible.

The handle of the waxer is removed, and the head is turned so the weight does not rest on the bristles.

The vacuum cleaner is stored in a clean dry place and can be removed without lifting. The hose for the attachments is kept in an apron with pockets made especially for the purpose.

Dust cloths are hung on hooks or if oily, they are kept in a can or jar.

Seldom used articles and reserve supplies are stored on the top shelf. The lower shelf is kept for articles more frequently used.

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[1]Mimeograph. Bureau of Home Economics, U.S.D.A. Closets and Other Storage Arrangements for the Farm Home. Maud Wilson, 1934, p. 21.

Clean rags are kept in a box on the shelf.

Tools are kept on the shelf, in a box equipped with a handle by which it may be carried.

The floor should be raised about 2" to keep lint from coming in under the door, as well as to keep inside the closet the dirt which may adhere to the cleaning equipment.

VIII. Linen Cabinet[1]

Trays or drawers are desirable for all articles in frequent or occasional use. The chief advantage of trays over drawers is that they may be placed on supports adjustable as to distance apart. Trays have a decided advantage over shelves in making contents visible and accessible and should be used in closets over 18" deep.

In determining distance between shelves or trays, allowance should be made for space at the top of a pile of articles as follows:

Shelves at elbow height or above	4"
Shelves below elbow height	6"
Drawers or trays	2"

A desirable length for cabinet is 36 inches

Shelves may be used at the top of the closet, since this space is not readily accessible and is only suitable for articles seldom used. Shelves should be readily removable and adjustable as to distance apart.

A depth of 18" to 24" accommodates articles commonly stored in bedding closets, including sheets and spreads. If bedding and pillows are kept elsewhere, the shelves may be only 14" in depth.

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[1]Mimeograph. Bureau of Home Economics, U.S.D.A. Closet and Other Storage Arrangements for the Farm Home. Maud M. Wilson, 1934, p. 16.