Guidelines are presented to encourage logical, systematic and creative facility planning, as well as to designate pertinent information to be incorporated when writing educational specifications for home economics facilities. Part I discusses the purpose, underlying assumptions, and guiding principles utilized in preparing the guide. Part II considers the kinds of teaching and learning activities to be carried on which will determine facility needs. Rating scales to determine educational objectives and the major emphasis of the program, as well as program information forms to assess course content, group size, and mode and level of learning, are included. Part III describes in detail the distinct spaces to be provided to house occupational preparation programs. Forms and checklists are provided to facilitate the detailed planning of lecture/demonstration, seminar, and laboratory areas. Part IV is an annotated bibliography of reference sources which provide additional information on facility planning.
A GUIDE FOR PLANNING FACILITIES FOR HOME ECONOMICS OCCUPATIONAL PREPARATION PROGRAMS
The Center for Vocational and Technical Education has been established as an independent unit on The Ohio State University campus with a grant from the Division of Adult and Vocational Research, U. S. Office of Education. It serves a catalytic role in establishing a consortium to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach, and interinstitutional in its program.

The major objectives of The Center follow:

1. To provide continuing reappraisal of the role and function of vocational and technical education in our democratic society;

2. To stimulate and strengthen state, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and technical education;

3. To encourage the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings;

4. To conduct research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education;

5. To upgrade vocational education leadership (state supervisors, teacher educators, research specialists, and others) through an advanced study and in-service education program;

6. To provide a national information retrieval, storage, and dissemination system for vocational and technical education linked with the Educational Research Information Center located in the U. S. Office of Education;
A GUIDE FOR PLANNING FACILITIES FOR

HOME ECONOMICS

OCCUPATIONAL PREPARATION PROGRAMS

RICHARD F. MECKLEY
IVAN E. VALENTINE
M. J. CONRAD

The Work Presented or Reported Herein Was Performed Pursuant To a Grant From the U. S. Office of Education, Department of Health, Education & Welfare.

THE CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION
THE OHIO STATE UNIVERSITY
980 KINNEAR ROAD
COLUMBUS, OHIO 43212
FOREWORD

One of the most fundamental concerns in planning for vocational and technical education facilities is that of assuring that educational requirements dictate the nature of the facilities. Other concerns include planning a sufficiently adaptable and flexible structure to permit needed modifications and programmatic changes over the lifetime of the building. Experiences have shown that adequate manuals and guide materials can provide substantial assistance in planning educational facilities. This document is a guide for planning facilities for occupational preparation programs in home economics. The information recorded in the guide is to be used in the preparation of educational specifications.

The guide lists a series of pivotal questions about the educational program to be offered. The answers to these program questions bear directly on the numbers and kinds of instructional areas needed in the contemplated facilities. After program decisions are recorded, the guide provides for the description of instructional areas needed to meet program requirements. Much of the material is presented in a checklist format which allows for consideration of alternatives in facility planning.

The guide was designed for use by any person or groups of persons responsible for planning home economics facilities. It is anticipated that knowledgeable persons such as home economics instructors, state supervisors of home economics, university school plant planners, and local administrators will find the guide a useful planning tool.

This guide is the first in a series being developed by The Center. Subsequent guides will be published for animal science technology, automotive trades, business and office occupations, data processing, dental technology, electrical technology, machine trades, medical technology, and metallurgy.

The Center for Vocational and Technical Education and The Administrative and Facilities Unit of the College of Education, The Ohio State University, worked together in developing this planning guide. Center staff project members, Dr. Richard F. Meckley, Ivan E. Valentine, and Zane McCoy, worked cooperatively with Dr. M. J. Conrad of the Administration and Facilities Unit.

Special acknowledgment and appreciation is due Mrs. Lenora Gross, president of The California Home Economics Association, and Dr. Sylvia L. Lee, home economics education specialist, The Center, who helped develop subject area content for the guide. Finally, the project staff is grateful to the many individuals and groups whose assistance and suggestions led to the successful conclusion of the project.

Robert E. Taylor, Director
The Center for Vocational and Technical Education
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A GUIDE FOR PLANNING FACILITIES FOR

HOME ECONOMICS

OCUPATIONAL PREPARATION PROGRAMS
PART I
INTRODUCTION

PURPOSE OF GUIDE

The major purpose of this guide is to elicit the necessary information for the writing of educational specifications for facilities to house needed occupational preparation programs in home economics.

In addition to the major purpose of providing important and comprehensive information to be incorporated in educational specifications, the guide is also designed to:

• Assist planners in the formation of creative solutions to the housing of desired educational programs.

• Prevent important considerations from being overlooked in the facility planning process.

• Encourage logical and systematic facility planning.

ORGANIZATION OF GUIDE

The facility planning guide is organized under four major headings or parts. Part I (Introduction) is a discussion of the major purpose, the underlying assumptions, and the guiding principles which were utilized in the preparation of the guide.

In Part II (The Instructional Program) important information is sought on the home economics department basic program features, objectives, and the kinds of occupational preparation programs which will be organized to implement them.

In Part III (Distinct Types of Instructional Areas to be Provided) the actual spaces desired to house the occupational preparation programs are described in detail.

Part IV is an annotated bibliography of reference sources which offer a more detailed treatment of the various phases of facility planning.
UNDERLYING ASSUMPTIONS

Important assumptions were made in the preparation of this guide:

- Major educational program decisions have been or are being made with content of instruction being determined through educational surveys, advisory committees, school board study, etc., and methods of instruction being determined by qualified home economics instructors and other appropriate staff members. The guide will ask important questions which may serve as guidelines to educational program planning.

- The numbers and kinds of students to be served by the program are generally known. Such information has been provided by enrollment projections, housing patterns, census data, student interests studies, etc.

- The information recorded in this guide will be used in the preparation of educational specifications for use by an architect in facility design.

- Sufficient finances are available to support both the provision of facilities and to operate the kinds of educational program outlined in the guide.

GUIDING PRINCIPLES

In planning facilities to house programs of occupational preparation in vocational home economics, it is suggested that educational program and facility decisions be consistent with the following principles.

1. The educational program is the basis for planning space and facilities.

2. Space and facilities should be planned to accommodate changes in the educational program.

3. The program should serve the needs of a variety of groups in the community.

4. Space and facilities for the program can be extended through the use of community resources.

5. Expanded programs are needed in the vocational home economics occupational preparation program to reach not only the average and those who are college bound, but also the unusually gifted, the physically handicapped, the mentally retarded and the culturally deprived.

6. Cooperation among teachers in developing inter-disciplinary units or courses is encouraged by the proximity, flexibility, and convenience of classrooms and work areas where teachers can plan together and produce materials.
7. Safe and healthful housing should be provided for all children.

8. Mobile equipment and convenient space for storing it make the same space available for many purposes, resulting in more efficient use of space.

9. The effective use of mechanical teaching aids, such as projectors, screens, recorders, and other devices, will depend upon the accessibility and convenience of storage.

10. Movable partitions, screens, folding doors, room dividers, and portable furnishings and equipment can help in adjusting space requirements to meet specific needs.

11. Accessible convenient outdoor space adds to the flexibility of the department and can be used in units in dealing with child care and family recreation.
PART II
THE INSTRUCTIONAL PROGRAM

In Part II of the guide, the planner records important instructional program decisions with respect to basic program features, objectives, and needed information on occupational preparation programs to be housed.

BASIC PROGRAM FEATURES

Basic features of the educational program are determined greatly by a school or department's educational philosophy. A philosophy of education provides a base from which program objectives and teaching and learning activities designed to meet these objectives can be derived. In the final analysis, it is the kinds of teaching and learning activities to be carried on which should determine facility needs.

In this section, planners have an opportunity to express basic program features which will serve as guidelines for the planned occupational preparation programs in home economics.

Indicate below the relative degree of emphasis to be placed on each of the program features started by circling the appropriate number. The scale provided for this purpose ranges from 1 for major emphasis, 2 for some emphasis, 3 for slight emphasis, to N for no emphasis. (This same scale will be used frequently throughout the planning guide.)

1. Purpose of Program
   a. To prepare students for gainful employment: 1 2 3 N
   b. To prepare students for entry into further training programs. The nature of this further training is: ____________________________

1 major emphasis
2 some emphasis
3 slight emphasis
N no emphasis
c. To prepare students for successful family living.

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<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>N</th>
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<tbody>
<tr>
<td>Other important program purposes are:</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>1)</td>
<td></td>
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<td>2)</td>
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<td>3)</td>
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<td>4)</td>
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</table>

2. Students

a. Students will be selected for entrance into the program.
The bases for selection will be:

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<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program will place emphasis on skill acquisition.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>N</td>
</tr>
<tr>
<td>The program will place emphasis on the learning of theory.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>N</td>
</tr>
<tr>
<td>Students will have access to learning materials.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>N</td>
</tr>
<tr>
<td>Students will be encouraged to act independently.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>N</td>
</tr>
<tr>
<td>Students will be provided with cooperative work experience outside the school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>N</td>
</tr>
<tr>
<td>Other basic program features in relation to students are:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>N</td>
</tr>
<tr>
<td>1)</td>
<td></td>
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<td>2)</td>
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<td>4)</td>
<td></td>
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</table>

3. Instruction

a. The instructional approach will be single discipline (home economics) as opposed to inter-disciplinary (home economics, science, etc.). If not a single disciplinary approach, describe the inter-disciplinary approach and the disciplines involved:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>N</th>
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<tbody>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
Cooperative or team instruction will be used. If this mode of instruction is to be extensively emphasized, describe in general terms:

Community resources will be utilized in instruction. If a high emphasis is to be placed on use of community resources, describe some of these resources:

Instructional flexibility is required. If a high emphasis is to be placed on instructional flexibility, describe the kinds of flexibility desired:

Other basic program features important to the planned instructional program are:

EDUCATIONAL OBJECTIVES

Educational objectives are often identified as goals or outcomes of the educational program. An objective should describe a desired educational outcome that is consistent with a school's philosophy.

Objectives are important to both the planner and the architect since they determine the school's program and related activities. They provide important implications which when translated into facilities can both enhance as well as adequately house the desired program. Thus it becomes imperative to clearly establish the program objectives prior to embarking on educational specifications and subsequent building design.

The purpose of this part of the guide is to bring together these elements in a way to provide direction and understanding for both the planner and the architect. Space is provided below to indicate
degree of emphasis by circling the appropriate number for each of the objectives, and to list additional objectives. The scale provided ranges from 1 for major emphasis down to N for no emphasis.

1. To prepare individuals for entry into gainful employment.  
   1  2  3  N

2. To motivate and recruit capable and qualified students to enroll in post-high school institutions.  
   1  2  3  N

3. To help prepare individuals to be effective consumers.  
   1  2  3  N

4. To provide pre-professional educational training for students who plan to enter colleges and universities.  
   1  2  3  N

5. To develop in students specific and measurable knowledge and skills in the care and guidance of children which include:
   a. Knowledge of needs and characteristics of young children.  
      1  2  3  N
   b. Supervision of the activities of young children.  
      1  2  3  N
   c. Preparation of food for young children.  
      1  2  3  N
   d. Proper care of sick children.  
      1  2  3  N
   e. ____________________________  
      1  2  3  N
   f. ____________________________  
      1  2  3  N

6. To develop in students specific and measurable knowledge and skills in food preparation and services which include:
   a. Preparation of large quantities of food.  
      1  2  3  N
   b. Service of large quantities of food.  
      1  2  3  N
   c. Knowledge of human nutrition.  
      1  2  3  N
   d. Participation in customer and employee and employer relationships.  
      1  2  3  N
   e. Knowledge of business management practices.  
      1  2  3  N
   f. ____________________________  
      1  2  3  N
7. To develop in students specific and measurable knowledge and skills in clothing management, production, and service which include:
   a. Design and construction of clothing  1 2 3 N
   b. Operation of power sewing machines  1 2 3 N
   c. Selection of clothing for personal wardrobe  1 2 3 N
   d. Knowledge of fibers and fabrics  1 2 3 N
   e.  
   f.  

8. To develop in students specific and measurable skills in the area of home furnishings, equipment, and services which include:
   a. Construction of home furnishings  1 2 3 N
   b. Knowledge and application of interior decoration principles  1 2 3 N
   c. Knowledge and application of interior design principles  1 2 3 N
   d. Knowledge of business management techniques  1 2 3 N
   e.  
   f.  

9. To develop in students specific and measurable skills in institutional and home management which include:
   a. Skills of proper housekeeping  1 2 3 N
   b. Preparation and serving of family meals  1 2 3 N
   c. Care of sick and elderly persons  1 2 3 N
   d. Purchase of foods and other household needs  1 2 3 N
   e.  
   f.  

11
10. Other program objectives include:

a. ____________________________ 1 2 3 N
b. ____________________________ 1 2 3 N
c. ____________________________ 1 2 3 N
d. ____________________________ 1 2 3 N

PROGRAM CONTENT AREAS

The educational program in occupational preparation vocational home economics should be designed to meet its established objectives. All decisions made with respect to educational program should be consistent with established philosophy and objectives.

Instruction in home economics can be classified into the two major categories of homemaking and occupational preparation. This guide is designed to assist in the planning of facilities for occupational preparation programs.

In homemaking, the courses or units of instruction emphasize acquisition of knowledge and the development of understanding, attitudes, and skills relevant to personal, home, and family life.

In occupational preparation, the courses or units of instruction emphasize the students' acquisition of knowledge and the development of understanding, attitudes, and skills relevant to occupational preparation and the utilization of specialized skills of home economics. Learning activities and experiences are organized to enable students to develop competencies essential for entry into their chosen occupations, to further training, or to acquire new or additional competencies for upgrading their occupational profession.

Instruction in occupational home economics is usually given in discrete subject areas or courses. Subject matter is coordinated with appropriate field, laboratory, and work experience. Programs of occupational preparation for the most part can be classified under the five broad headings or content areas of: 1) care and guidance of children; 2) clothing management, production, and services; 3) food management, production, and services; 4) home furnishings, equipment, and services; 5) institutional and home management and supporting services.

These five content areas relate directly to the field of home economics and can be used to categorize most occupational preparation programs in the field. However, students in these programs often elect or are required to take courses in subjects such as English, mathematics, and physical education which are available to

12
all students. For example, an eleventh grade student in training to become a child care aide might take the following courses or units:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Content Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Care I</td>
<td>Care and Guidance of Children</td>
</tr>
<tr>
<td>American History</td>
<td>Academic</td>
</tr>
<tr>
<td>Biology</td>
<td>Science</td>
</tr>
<tr>
<td>English</td>
<td>Academic</td>
</tr>
<tr>
<td>Physical Education I</td>
<td>Physical Education</td>
</tr>
</tbody>
</table>

The concept of content areas is used in this planning guide because different instructional content areas usually call for different kinds of instructional facilities and equipment. The following content areas, which usually call for specialized instructional areas, are used in this guide.

- Care and Guidance of Children
- Clothing Management, Production, and Services
- Food Management, Production, and Services
- Home Furnishings, Equipment, and Services
- Institutional and Home Management and Supporting Services
- Academic (e.g., English, mathematics, and social studies)
- Science (e.g., physics, chemistry, and biology)
- Music (e.g., band chorus, and choir)
- Physical Education
- Other (this category is used in the event that a course or unit to be offered will not fit into any of the above content areas)

**PLANNING INSTRUCTIONAL AREAS BY MODES OF LEARNING**

The planning of instructional areas for vocational facilities can be substantially aided through utilization of the concept of modes of learning. Learning can be divided into three distinct modes—reaction learning, interaction learning, and action learning.

Reaction learning, which often occurs in an instructional area designed for lecture and demonstration, is characterized by activities which tend to be largely teacher-centered with the central focus on instruction. Student activities include listening, observing, and the taking of notes. Group size for reaction learning may vary from one to a very large number as the number of students has little effect on the learning experience if proper technological aids such as television, microphones, projectors and the like are used. Because student activities are relatively passive in reaction learning, a short optimum time span is normally employed.

Lecture/demonstration areas are usually designed to be used in common for reaction learning in all subject areas. For example, in planning facilities for two diverse occupational preparation programs in home economics such as child care aide training and cooking, the planner should bear in mind that reaction learning for students in both programs can occur in the same kind of
instructional area. This means that facility planning should be done in terms of the total program rather than its fractional parts. In many instances, lecture/demonstration areas can be shared not only by occupational preparation programs within vocational service areas, but also shared by distinct and dissimilar service areas such as home economics and business occupations. Where a great deal of facility sharing is planned, the planner should consider the relative merits of optimum location within the total building and the advisability of clustering various instructional areas.

Interaction learning, which often occurs in a seminar-type instructional area, is characterized by both teacher and learner activity participating as both listener and speaker. This mode of learning, of course, must occur in groups; however, sociological research suggests these groups should not exceed fifteen persons for optimum effectiveness. Active interaction of all students generally requires a longer time span than reaction learning.

Seminar areas, like lecture/demonstration areas, are usually designed for common use by all vocational service areas. The same considerations which were outlined for lecture/demonstration areas also apply to seminar areas.

Action learning, which usually occurs in a laboratory instructional area, is characterized by the individual student learning by doing. Although learning is done on an individual basis, students may, nevertheless, function in a group setting. Very often in more flexible types of educational programs, students are scheduled for laboratory work on an individual basis. Since action learning involves overt action by individual students, the teacher's role is largely that of a consultant to the learner.

Laboratory instructional areas, of necessity, are more specialized than lecture/demonstration areas used for reaction learning and seminar areas used for interaction learning. Since laboratory areas are designed to facilitate the learning of specific vocational and technical skills, there is less likelihood of sharing such areas by students in various vocational training programs. However, wherever common elements of skill instruction are found among vocational training programs, the possibility of sharing and clustering laboratory facilities can be both expedient and economical.

NOTE: THE FOLLOWING SECTIONS OF THE GUIDE (PAGES 11-22) ARE DESIGNED TO ASSIST IN MAKING MATHEMATICAL DETERMINATIONS OF THE NUMBER OF VARIOUS KINDS OF INSTRUCTIONAL AREAS NEEDED TO HOUSE THE DESIRED PROGRAM. IF THE NUMBERS OF INSTRUCTIONAL AREAS REQUIRED ARE ALREADY KNOWN, PLANNERS MAY NOW PROCEED DIRECTLY TO FORM E, PAGE 23. IF, HOWEVER, MATHEMATICAL DETERMINATIONS ARE TO BE MADE, ALL FORMS SHOULD BE COMPLETED AS ACCURATELY AS POSSIBLE.

OCCUPATIONAL PREPARATION PROGRAMS TO BE OFFERED

Information for each home economics occupational preparation program to be offered is entered on a separate Form A (pages 19-22). Directions for completing Form A(s) appear on pages 16-17. To assist planners, a sample, completed Form A is given on page 18.
Data entered in the sample Form A are for a child care aide training program. The data were assumed for purpose of illustration. Some other occupational preparation programs commonly offered in the vocational service area of home economics include nursery school assistant, power sewing, fashion merchandising, tailoring, textiles, fashion design, dry cleaning, dietetics, commercial baking, home catering and household service, food processing, chef training, upholstering, housing and home furnishings, interior decoration, interior design, and hotel and motel operation.

Form A for each occupational preparation program should be filled out as completely as possible. However, it is realized, for example, that a home economics instructor completing Form A may be unaware of time allotments and methods of instruction in other subject areas. If such is the case, the instructor can only supply information on courses within the content areas of home economics.
INSTRUCTIONS FOR COMPLETING FORM A

Item 1
Occupational Preparation Program--Enter here the name of the occupational program to be offered, e.g., commercial baking, upholstering, etc. Complete a separate Form A for each occupational preparation program to be offered.

Item 2
Yearly Enrollment--Enter here the projected maximum number of students to be enrolled yearly in the program at all grade levels.

Item 3
Nature of Students--Underline all categories which apply to students to be enrolled in the program.

Item 4
Weeks of Instruction per year--Enter here the number of weeks per year the school will be open for instruction, e.g., 36 weeks, 52 weeks.

Item 5
Total Weekly Periods or Modules--Enter here the total number of periods or modules (if modular scheduling is to be used) per week available for instructional purposes for each student. Do not count periods or modules scheduled for lunch and other non-instructional purposes.

Column 6
Courses of Instruction--List the courses or units of instruction to be offered either on a required or elective basis for the complete occupational preparation program.

Column 7
Content Area--Opposite each course of instruction, enter the appropriate content area as presented on pages 12 and 13.

Column 8
Total Course Enrollment--Opposite each course of instruction, enter the projected maximum student enrollment.

Column 9
Maximum Group Size for Reaction Learning--Opposite each course or unit of instruction, enter the maximum group size in number of students desired for reaction (lecture/demonstration) type learning.

Column 10
Estimated Weekly Periods or Modules of Reaction Level Learning--Opposite each course or unit of instruction, enter the estimated number of periods or modules per week to be devoted to reaction learning (lecture/demonstration) per student.
Column 11

Weekly Group-Periods or Modules (Lecture/Demonstration)--To compute weekly group-periods or modules, divide the entry in Column 8 by the entry in Column 9 and round up to the nearest whole number. Then multiply the whole number by the entry in Column 10.

Column 12

Maximum Group Size for Interaction Learning--Opposite each course or unit of instruction, enter the maximum group size in number of students desired for interaction (seminar) type learning.

Column 13

Estimated Weekly Periods or Modules of Interaction Level Learning--Opposite each course or unit of instruction, enter the estimated number of periods or modules per week to be devoted to interaction learning (seminar) per student.

Column 14

Weekly Group-Periods or Modules (Seminar)--To compute weekly group-periods or modules, divide the entry in Column 8 by the entry in Column 12 and round up to the nearest whole number. Then multiply the whole number by the entry in Column 13.

Column 15

Maximum Group Size for Action Learning--Opposite each course or unit of instruction, enter the maximum group size in number of students desired for action (laboratory) type learning.

Column 16

Estimated Weekly Periods or Modules of Action Level Learning--Opposite each course or unit of instruction, enter the estimated number of periods or modules per week to be devoted to action (laboratory) learning per student.

Column 17

Weekly Group-Periods or Modules (Laboratory)--To compute weekly group-periods or modules, divide the entry in Column 8 by the entry in Column 15 and round up to the nearest whole number. Then multiply the whole number by the entry in Column 16.
**FORM A**

**BASIC PROGRAM INFORMATION**

1. Occupational Preparation Program  
   Child Care Aide

2. Yearly Enrollment  
   120

3. Nature of Students (underline appropriate categories); a. day school; b. night school; c. school age; d. adults; e. males; f. females; other (specify)

4. As of Instruction per Year  
   36

5. Total Weekly Periods or Modules  
   30

<table>
<thead>
<tr>
<th>Courses of Instruction</th>
<th>Content Areas</th>
<th>Total Course Enrollment</th>
<th>Maximum Group Sizes, Estimated Weekly Periods or Modules and Calculated Group-Modules or Period-Modules by Levels of Learning</th>
</tr>
</thead>
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<td>ACTION\textsuperscript{1}</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Max. Group Size</td>
</tr>
<tr>
<td>Child Care 1</td>
<td>Child Care</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>Child Care 2</td>
<td>Child Care</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>Adol. Dev. 1</td>
<td>Child Care</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>Adol. Dev. 2</td>
<td>Child Care</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>Am. History</td>
<td>Academic</td>
<td>60</td>
<td>50</td>
</tr>
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<td>Democracy</td>
<td>Academic</td>
<td>60</td>
<td>50</td>
</tr>
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</tr>
</tbody>
</table>

\textsuperscript{1}If both day and night school are to be offered, fill out separate forms for each.
\textsuperscript{2}(Lecture/demonstration)
\textsuperscript{3}(Seminar)
\textsuperscript{4}(Laboratory)
FORM A
BASIC PROGRAM INFORMATION

1. Occupational Preparation Program

2. Yearly Enrollment

3. Nature of Students (underline appropriate categories); a. day school; b. night school; c. school age; d. adults; e. males; f. females; other (specify)

4. Weeks of Instruction per Year

5. Total Weekly Periods or Modules

<table>
<thead>
<tr>
<th>Courses of Instruction</th>
<th>Content Areas</th>
<th>Total Course Enrollment</th>
<th>Maximum Group Sizes, Estimated Weekly Periods or Modules and Calculated Group-Modules or Period-Modules by Levels of Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>REACTION**</td>
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<td>Maximum Group Size</td>
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<td></td>
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<td>(15)</td>
</tr>
</tbody>
</table>

1 If both day and night school are to be offered, fill out separate forms for each.

*(Lecture/demonstration)
***(Seminar)
****(Laboratory)
1. Occupational Preparation Program

2. Yearly Enrollment

3. Nature of Students (underline appropriate categories); a. day school\(^1\); b. night school\(^1\); c. school age; d. adults; e. males; f. females; other (specify)

4. Weeks of Instruction per Year

5. Total Weekly Periods or Modules

<table>
<thead>
<tr>
<th>Courses of Instruction</th>
<th>Content Areas</th>
<th>Total Course Enrollment</th>
<th>Maximum Group Sizes, Estimated Weekly Periods or Modules and Calculated Group-Modules or Period-Modules by Levels of Learning</th>
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<td>INTERACTION(^3)</td>
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<td>ACTION(^4)</td>
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<td></td>
<td>(12)</td>
</tr>
</tbody>
</table>

\(^1\)If both day and night school are to be offered, fill out separate forms for each.

\(*\)(Lecture/demonstration)
\(**\)(Seminar)
\(**\)(Laboratory)
FORM A

BASIC PROGRAM INFORMATION

1. Occupational Preparation Program __________________________

2. Yearly Enrollment __________________________

3. Nature of Students (underline appropriate categories); a. day school\(^1\); b. night school\(^1\); c. school age; d. adults; e. males; f. females; other (specify) __________________________

4. Weeks of Instruction per Year __________________________

5. Total Weekly Periods or Modules __________________________

<table>
<thead>
<tr>
<th>Courses of Instruction</th>
<th>Content Areas</th>
<th>Total Course Enrollment</th>
<th>Maximum Group Sizes, Estimated Weekly Periods or Modules by Levels of Learning</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td>REACTION(^H)</td>
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<td>Maximum Group Size</td>
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<td>(6)</td>
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<td></td>
<td>(8)</td>
</tr>
</tbody>
</table>

\(^1\)If both day and night school are to be offered, fill out separate forms for each.

*(Lecture/demonstration)*

**(Seminar)**

**(Laboratory)**
### FORM A

**BASIC PROGRAM INFORMATION**

1. **Occupational Preparation Program**

2. **Yearly Enrollment**

3. **Nature of Students** (underline appropriate categories); a. day school; b. night school; c. school age; d. adults; e. males; f. females; other (specify)

4. **Weeks of Instruction per Year**

5. **Total Weekly Periods or Modules**

<table>
<thead>
<tr>
<th>Courses of Instruction</th>
<th>Content Areas</th>
<th>Total Course Enrollment</th>
<th>Maximum Group Sizes, Estimated Weekly Periods or Modules and Calculated Group-Modules or Period-Modules by Levels of Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td><strong>REACTION</strong>&lt;sup&gt;h&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>INTERACTION</strong>&lt;sup&gt;hh&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>ACTION</strong>&lt;sup&gt;hhh&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Maximum Group Size                                                   Weekly Periods or Modules                      Weekly Group-Periods or Modules</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weekly Group Size                                                   Weekly Periods or Modules                      Weekly Group-Periods or Modules</td>
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<td></td>
<td></td>
<td>Maximum Group Size                                                   Weekly Periods or Modules                      Weekly Group-Periods or Modules</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Maximum Group Size                                                   Weekly Periods or Modules                      Weekly Group-Periods or Modules</td>
</tr>
</tbody>
</table>

1 If both day and night school are to be offered, fill out separate forms for each.

*(Lecture/demonstration)*

**(Seminar)**

**(Laboratory)**
PART III

DISTINCT TYPES OF INSTRUCTIONAL AREAS TO BE PROVIDED

QUANTITATIVE FACILITY NEEDS

The number of instructional areas to house the programs described in Part II (The Instructional Program) are recorded in this section of the guide.

As indicated in Part II, there are three principal types of instructional areas used to accommodate educational programs. They are:

- **Lecture/demonstration areas**—used principally for group reaction learning;
- **Seminar areas**—used principally for group interaction learning; and
- **Laboratory areas**—used principally for group or individual action learning.

In addition to these instructional areas, there are, of course, other school-wide auxiliary areas such as instructional materials centers, language laboratories, gymnasiums, and auditoriums which are part of the overall school plan. Requirements for such facilities are calculated as a part of total school planning and are not made in this guide.

It is recommended that facility needs, including occupational preparation programs in home economics, be made on a school-wide basis in order to provide planners with a balanced picture of the building to be constructed and in order to provide economy and convenience through the sharing and clustering of various kinds of facilities and equipment.

Forms B, C, and D can be used to compute the number of lecture/demonstration, seminar, and laboratory areas required, respectively, for the planned programs in home economics occupational preparation. The use of these forms requires some mathematical ability. Personnel responsible for completing the guide may want to utilize the services of individuals with this special competence.
Results of the computations on Forms B, C, and D are entered on Form E which is a summary of total instructional area requirements for home economics occupational preparation programs.

In the event that instructional area requirements are already determined (e.g., it has been decided that one combination laboratory and lecture/demonstration area will be provided) the information can be recorded directly on Form E without making the computations on Forms B, C, and D.
INSTRUCTIONS FOR COMPLETING FORM B
LECTURE/Demonstration Area Requirements By Content Areas

Column 1
Content Area--Content areas are listed in Column 1.

Column 2
Total Enrollment--To obtain total enrollment for content areas, find the sum total enrollment for each content area as indicated in Columns 7 and 8 of Form A(s) for all occupational preparation programs.

Column 3
Maximum Group Size--Opposite each content area, enter the maximum group size desired for a lecture/demonstration area to serve the content area. (Form A, Column 9).

Column 4
Total Weekly Periods or Modules--Opposite each content area, enter the total periods or modules per week the school will be open for day school instruction. This entry will be identical for all content areas and identical to the number recorded for Item 5, Form A.

Column 5
Total Weekly Reaction Group Periods or Modules--Opposite each content area, enter the total group periods or modules per week to be devoted to reaction learning as indicated in Column 11 of Form A(s) for all occupational preparation programs.

Column 6
Lecture/Demonstration Areas Required--Opposite each content area, enter the quotient of Item 5 divided by Item 4. Round up to the nearest hundredth.

Column 7
Adjusted Lecture/Demonstration Areas Required--To adjust for scheduling difficulties which result in areas being less than 100 percent utilized, multiply the entry in Column 6 by 1.3 and enter the result, rounded up to the nearest hundredth, in Column 7 for each content area.

Column 8
Totals--Since lecture/demonstration areas, unlike laboratory areas, can be utilized by nearly all content areas, the entries in Column 7 can be added for all lecture/demonstration areas with identical maximum group sizes as entered in Column 3. For example, 8a might read 2 lecture/demonstration areas with a student capacity of 50 each.
# FORM B

**LECTURE/DEMONSTRATION AREA REQUIREMENTS**

**BY CONTENT AREAS**

<table>
<thead>
<tr>
<th>CONTENT AREA</th>
<th>TOTAL ENROLLMENT</th>
<th>MAXIMUM GROUP SIZE</th>
<th>TOTAL WEEKLY PERIODS OR MODULES</th>
<th>TOTAL WEEKLY REACTION GROUP-PERIODS OR MODULES</th>
<th>LECTURE/DEMONSTRATION AREAS REQUIRED</th>
<th>ADJUSTED LECTURE/DEMONSTRATION AREAS REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>Care &amp; Guidance of Children</td>
<td>240</td>
<td>100</td>
<td>30</td>
<td>7</td>
<td>0.24</td>
<td>0.31</td>
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<tr>
<td>Clothing Management, Production &amp; Services</td>
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<tr>
<td>Home Furnishings, Equipment &amp; Services</td>
<td></td>
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</tr>
<tr>
<td>Institutional &amp; Home Management &amp; Supporting Services</td>
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<tr>
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</tbody>
</table>

(8) Totals (Figures in Column 7 can be added together for areas with same student capacity as entered in Column 3). Round off total to next higher whole number.

- a. 1 lecture/demonstration areas with a student capacity of 100, each.
- b. 1 lecture/demonstration areas with a student capacity of 100, each.
- c. 1 lecture/demonstration areas with a student capacity of 100, each.
- d. 1 lecture/demonstration areas with a student capacity of , each.
<table>
<thead>
<tr>
<th>CONTENT AREA</th>
<th>TOTAL ENROLLMENT</th>
<th>MAXIMUM GROUP SIZE</th>
<th>TOTAL WEEKLY PERIODS OR MODULES</th>
<th>TOTAL WEEKLY REACTION GROUP PERIODS OR MODULES</th>
<th>LECTURE/Demonstration Areas Required (5) ÷ (4)</th>
<th>ADJUSTED LECTURE/Demonstration Areas Required (6) ÷ 1.3</th>
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</thead>
<tbody>
<tr>
<td>Care &amp; Guidance of Children</td>
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<tr>
<td>Clothing Management, Production &amp; Services</td>
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<tr>
<td>Food Management Production &amp; Services</td>
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<tr>
<td>Home Furnishings, Equipment &amp; Services</td>
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<tr>
<td>Institutional &amp; Home Management &amp; Supporting Services</td>
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<tr>
<td>Physical Education</td>
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<tr>
<td>Other (specify)</td>
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</tr>
</tbody>
</table>

(8) Totals (Figures in Column 7 can be added together for areas with same student capacity as entered in Column 3). Round off total to next higher whole number.

a. ____________ lecture/demonstration areas with a student capacity of ____________, each.
b. ____________ lecture/demonstration areas with a student capacity of ____________, each.
c. ____________ lecture/demonstration areas with a student capacity of ____________, each.
d. ____________ lecture/demonstration areas with a student capacity of ____________, each.
INSTRUCTIONS FOR COMPLETING FORM C
SEMINAR AREA REQUIREMENTS BY CONTENT AREAS

Column 1
Content Area--Content areas are listed in Column 1.

Column 2
Total Enrollment--To obtain total enrollment for content areas, find the sum total enrollment for each content area indicated in Column 7 and 8 of Form A(s) for all occupational preparation programs.

Column 3
Maximum Group Size--Opposite each content area, enter the maximum group size desired for a seminar area to serve the content area. (Form A, Column 12)

Column 4
Total Weekly Periods or Modules--Opposite each content area, enter the total periods or modules per week the school will be open for day school instruction. This entry will be identical for all content areas and identical to the number recorded for Item 5, Form A.

Column 5
Total Weekly Interaction Group Periods or Modules--Opposite each content area, enter the total group periods or modules per week to be devoted to interaction learning as indicated in Column 14 of Form A(s) for all occupational preparation programs.

Column 6
Seminar Areas Required--Opposite each content area, enter the quotient of Item 5 divided by Item 4. Round up to the nearest hundredth.

Column 7
Adjusted Seminar Areas Required--To adjust for scheduling difficulties which result in areas being less than 100 percent utilized, multiply the entry in Column 6 by 1.3 and enter the result, rounded up to the nearest hundredth, in Column 7 for each content area.

Column 8
Totals--Since seminar areas, unlike laboratory areas, can be commonly utilized by nearly all content areas, the entries in Column 8 can be added for all seminar areas with identical maximum group sizes or entered in Column 3. For example, 8a might read 2 seminar areas with a student capacity of 20, each.
## FORM C
### SEMINAR AREA REQUIREMENTS
#### BY CONTENT AREAS

<table>
<thead>
<tr>
<th>CONTENT AREA</th>
<th>TOTAL ENROLLMENT</th>
<th>MAXIMUM GROUP SIZE</th>
<th>TOTAL WEEKLY PERIODS OR MODULES</th>
<th>TOTAL WEEKLY INTERACTION GROUP-PERIODS OR MODULES</th>
<th>SEMINAR AREAS REQUIRED (5) + (4)</th>
<th>ADJUSTED SEMINAR AREAS REQUIRED (6) X 1.3</th>
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<tbody>
<tr>
<td>Care &amp; Guidance of Children</td>
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<td>15</td>
<td>30</td>
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<td>Home Furnishings, Equipment &amp; Services</td>
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<tr>
<td>Institutional &amp; Home Management &amp; Supporting Services</td>
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</tr>
</tbody>
</table>

(8) Totals (Figures in Column 7 can be added together for areas with same student capacity as entered in Column 3). Round up total to next higher whole number.

- a. 3 seminar areas with a minimum student capacity of 15, each.
- b. 3 seminar areas with a minimum student capacity of 15, each.
- c. 3 seminar areas with a minimum student capacity of 15, each.
- d. 3 seminar areas with a minimum student capacity of 15, each.
<table>
<thead>
<tr>
<th>CONTENT AREA</th>
<th>TOTAL ENROLLMENT</th>
<th>MAXIMUM GROUP SIZE</th>
<th>TOTAL WEEKLY PERIODS OR MODULES</th>
<th>TOTAL WEEKLY INTERACTION GROUP-PERIODS OR MODULES</th>
<th>SEMINAR AREAS REQUIRED ( (5) + (4) )</th>
<th>ADJUSTED SEMINAR AREAS REQUIRED ( (6) \times 1.3 )</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Science</td>
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<td>Music</td>
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<tr>
<td>Physical Education</td>
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<tr>
<td>Other (specify)</td>
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</tr>
</tbody>
</table>

(8) Total (Figures in Column 7 can be added together for areas with same student capacity as entered in Column 3). Round up total to next higher whole number.

a. ____________ seminar areas with a minimum student capacity of _____, each.

b. ____________ seminar areas with a minimum student capacity of _____, each.

c. ____________ seminar areas with a minimum student capacity of _____, each.

d. ____________ seminar areas with a minimum student capacity of _____, each.
INSTRUCTIONS FOR COMPLETING FORM D
LABORATORY AREA REQUIREMENTS BY CONTENT AREAS

Column 1
Content Area--Content areas are listed in Column 1.

Column 2
Total Enrollment--To obtain total enrollment for content areas, find the sum total enrollment for each area as indicated in Columns 7 and 8 of Form A for all occupational preparation programs.

Column 3
Maximum Group Size--Opposite each content area, enter the maximum group size desired for a laboratory area to serve the content area (Form A, Column 15).

Column 4
Total Weekly Periods or Modules--Opposite each content area, enter the total periods or modules per week the school will be open for day school instruction. This entry will be identical for all content areas and identical to the number recorded for Item 5, Form A.

Column 5
Total Weekly Action Group Periods or Modules--Opposite each content area, enter the total group-periods or modules per week to be devoted to action learning as indicated in Column 17 of Form A(s) for all occupational preparation programs.

Column 6
Laboratory Areas Required--Opposite each content area, enter the quotient of Item 5 divided by Item 4. Round up to the nearest hundredth.

Column 7
Adjusted Laboratory Areas Required--To adjust for scheduling difficulties which result in areas being less than 100 percent utilized, multiply the entry in Column 6 by 1.3 and enter the result, rounded up to the nearest hundredth, in Column 7 for each content area.
<table>
<thead>
<tr>
<th>CONTENT AREA</th>
<th>(1)</th>
<th>(2)</th>
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# Laboratory Area Requirements

## By Content Areas

<table>
<thead>
<tr>
<th>CONTENT AREA</th>
<th>TOTAL ENROLLMENT</th>
<th>MAXIMUM GROUP SIZE</th>
<th>TOTAL WEEKLY PERIOD OR MODULES</th>
<th>TOTAL WEEKLY ACTION GROUP-PERIODS OR MODULES</th>
<th>LABORATORY AREAS REQUIRED</th>
<th>LABORATORY ADJUSTED AREAS REQUIRED</th>
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<td>Other (specify)</td>
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</table>
FORM E

SUMMARY OF FACILITY REQUIREMENTS FOR HOME ECONOMICS OCCUPATIONAL PREPARATION PROGRAMS

1. Lecture/demonstration areas for reaction learning (See Form B)
ex. ______ area(s) with a student capacity of ______, each.
   a. ______ area(s) with a student capacity of ______, each.
   b. ______ area(s) with a student capacity of ______, each.
   c. ______ area(s) with a student capacity of ______, each.
   d. ______ area(s) with a student capacity of ______, each.

2. Seminar areas for interaction learning (See Form C)
ex. ______ area(s) with a student capacity of ______, each.
   a. ______ area(s) with a student capacity of ______, each.
   b. ______ area(s) with a student capacity of ______, each.

3. Laboratory areas for action learning (See Form D)
ex. ______ laboratory area(s) with a student capacity of ______, each.
   a. ______ care and guidance of children laboratory area(s) with a student capacity of ______, each.
   b. ______ clothing laboratory area(s) with a student capacity of ______, each.
   c. ______ foods laboratory area(s) with a student capacity of ______, each.
   d. ______ home furnishings laboratory area(s) with a student capacity of ______, each.
   e. ______ institutional and home management laboratory area(s) with a student capacity of ______, each.

4. Multi-purpose areas

If any of the specialized areas above are to be combined as multi-purpose spaces, indicate the combinations desired.

ex. Care and guidance of children laboratory and lecture/demonstration area

   a. ________________________________
   b. ________________________________
   c. ________________________________
   d. ________________________________

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QUALITATIVE FACILITY NEEDS

In this section, detailed information on the kind of instructional areas required is recorded. Special forms are provided for describing the nature of lecture/demonstration areas, seminar areas, laboratory areas, and auxiliary areas to be provided. For each type of instructional area required information is sought in the following categories.

1. The relationship of the area to other instructional areas (specialized vs. multi-purpose utilization of space).
2. The number of these kinds of areas needed.
3. The activities of students and teachers in the instructional area.
4. The spatial relationships within the area and the area's spatial relationships to other instructional areas and the building as a whole.
5. The furniture and equipment required for the area.
6. The environmental factors required for the area.
7. The special utility services required for the area.
8. The minimum space requirements required for the area.
FORM F

DESCRIPTION OF LECTURE/DEMONSTRATION AREA(S) TO BE USED
PRINCIPALLY FOR GROUP REACTION LEARNING

1. The lecture/demonstration area(s) should be planned:
   a. As independent unit(s) Yes No
   b. In combination with laboratory area(s) (specify) Yes No
   c. In combination with seminar area(s) Yes No
   d. As an area within a single multi-purpose space Yes No

2. Number of lecture/demonstration areas required for the desired program (See Form E)

3. Student and teacher activities in this space. Indicate the extent to which each of the activities listed below will occur.
   a. Listening to lectures 1 2 3 N
   b. Observing demonstrations 1 2 3 N
   c. Taking notes 1 2 3 N
   d. Viewing films, slides, overhead projections, etc. 1 2 3 N
   e. ______
   f. ______

4. Spatial relationships. Indicate the extent to which the lecture/demonstration area(s) should be accessible to the:
   a. Instructional materials center 1 2 3 N
   b. Building entrance 1 2 3 N
   c. Delivery area 1 2 3 N
   d. Other instructional areas
      1) ____________ 1 2 3 N
      2) ____________ 1 2 3 N
      3) ____________ 1 2 3 N
   e. Other building areas
      1) ____________ 1 2 3 N
      2) ____________ 1 2 3 N
      3) ____________ 1 2 3 N

5. Furniture and Equipment
   a. Student seating
      1) Individual desks and chairs P A NA*
         a) Number of desks and chairs required Yes No
         b) Provision for storage P A NA
      2) Permanent-type desks
         a) Number required Yes No
         b) Provision for storage P A NA

*Code: P = Preferred; A = Acceptable; NA = Not Acceptable. This is used frequently throughout this part of the guide.
FORM F

3) Desk and chair combination
   a) Number required
   b) Provision for storage

4) Tables and chairs
   a) Number of tables required
   b) Number of chairs required
   c) Provision for storage

5) Auditorium-type seating
   Number of seats required

b. Stage
   1) Permanent type
   2) Portable type
      The approximate area in square feet desired

   c. Sound amplifying system
   d. Controls for regulating light intensity
   e. Lectern
      1) Permanent type
      2) Portable type
      3) Provision for storage
   f. Projection screen
      1) Built-in type
      2) Portable type
      3) Approximate dimensions
      4) Provision for storage
   g. Other equipment required for lecture/demonstration area(s) are:
      1) ____________________________
      2) ____________________________
      3) ____________________________
      4) ____________________________

6. Environmental factors

a. Aesthetic. Factors to be considered in the aesthetic domain are colors, light, style of architecture, design and the like. Indicate any special aesthetic considerations important to the planning of the lecture/demonstration area(s).
   ____________________________
   ____________________________
   ____________________________
   ____________________________

b. Aerial. Factors to be considered in this category include air temperature, radiant temperature, relative humidity, and ventilation. Indicate any special considerations important to the planning of the lecture/demonstration area(s).
   ____________________________
   ____________________________
   ____________________________
   ____________________________
c. Visual. A properly controlled and balanced visual environment is important. The visual environment affects such things as accuracy in perception, attention to tasks, and speed of performance. Indicate any special factors which should be taken into account and planning the visual environment of the lecture/demonstration area(s).


d. Sonic. Factors to be considered in this category include such things as acoustical requirements and sound systems. Indicate any special consideration important to the planning of the lecture/demonstration area(s).


e. Safety. In planning a school building, safety for pupils and teachers is of prime concern. Indicate any special safety considerations which have implications for design of the lecture/demonstration area(s).


7. Vertical instructional surfaces

a. Chalkboard
   1) Wall-mounted
   2) Number of lineal feet
   3) Portable
   4) Provision for storage

b. Tackboard
   Number of lineal feet

c. Pegboard
   Number of lineal feet


8. Special utility services required

a. Electricity for:
   1) Projection equipment
   2) Sound amplifying equipment
   3) Electrical needs for other equipment (specify)
      a)
      b)
      c)
      d)


b. Other utility needs for the lecture/demonstration area(s)

1) 
2) 
3) 
4) 

9. The minimum space requirement in square feet for each lecture/demonstration area. (Optional) (The planner should be aware of any state or local regulations or recommendations concerning floor space requirements.)

10. Other important factors to be considered in the planning of the lecture/demonstration area(s) are:
FORM G

DESCRIPTION OF SEMINAR AREA(S) TO BE USED PRINCIPALLY FOR GROUP INTERACTION LEARNING

1. The seminar area(s) should be planned:
   a. As independent unit(s)  
      Yes  No
   b. In combination with laboratory area(s) (specify)  
      Yes  No
   c. In combination with lecture/demonstration area(s)  
      Yes  No
   d. As an area within a single multi-purpose space  
      Yes  No

2. The number of seminar area(s) required for the desired program (See Form E)  

3. Student and teacher activities in this space. Indicate the extent to which each of the activities listed below will occur.
   a. Small group discussing  1 2 3 N
   b. Viewing films, slides, overhead projections, etc.  1 2 3 N
   c. Demonstrating  1 2 3 N
   d. Reporting  1 2 3 N
   e. Working on projects  1 2 3 N
   f. __________________________  1 2 3 N
   g. __________________________  1 2 3 N

4. Spatial relationships. Indicate the extent to which the seminar area(s) should be accessible to the:
   a. Instructional materials center  1 2 3 N
   b. Building entrance  1 2 3 N
   c. Delivery area  1 2 3 N
   d. Other instructional areas
      1) __________________________  1 2 3 N
      2) __________________________  1 2 3 N
      3) __________________________  1 2 3 N
   e. Other building areas
      1) __________________________  1 2 3 N
      2) __________________________  1 2 3 N
      3) __________________________  1 2 3 N

5. Furniture and equipment
   a. Seminar table
      1) Number required  
         P  A  NA
      2) Seating for how many persons  
         P  A  NA
      3) Permanent type  
         Yes  No
      4) Portable type
      5) Provision for storage
   b. Chairs
      1) Number required  
         P  A  NA
      2) Straight-back type
FORM G

3) Folding type
4) Provision for storage

C. Other equipment required for seminar area(s) are:
1) 
2) 
3) 

6. Environmental factors

a. Aesthetic. Factors to be considered in the aesthetic domain are colors, light, style of architecture, design and the like. Indicate any special aesthetic considerations important to the planning of the seminar areas.

b. Aerial. Factors to be considered in this category include air temperature, radiant temperature, relative humidity, and ventilation. Indicate any special considerations important to the planning of the seminar area(s).

c. Visual. A properly controlled and balanced visual environment is important. The visual environment affects such things as accuracy in perception, attention to tasks, and speed of performance. Indicate any special factors which should be taken into account in planning the visual environment of the seminar area(s).

d. Sonic. Factors to be considered in this category include such things as acoustical requirements and sound system. Indicate any special considerations important to the planning of the seminar area(s).

e. Safety. In planning a school building, safety for pupils and teachers is of prime concern. Indicate any special safety considerations which have implications for design of the seminar area(s).

8. Vertical instructional surfaces
FORM G

a. Chalkboard
   1) Wall-mounted
   2) Number of lineal feet
   3) Portable
   4) Provision for storage
b. Tackboard
   Number of lineal feet
c. Pegboard
   Number of lineal feet

9. Special utility services required

a. Electricity
   1) Projection equipment
   2) Sound amplifying equipment
   3) Electrical needs for other equipment (specify)

b. Other utility needs for the seminar area(s)
   1)
   2)
   3)
   4)

10. Minimum space requirement in square feet for each seminar area (Optional) *(The planner should be aware of any state or local regulations or recommendations concerning floor space requirements.)*

11. Other important factors to be considered in the planning of the seminar area(s) are:
FORM H

DESCRIPTION OF CARE AND GUIDANCE OF CHILDREN LABORATORY AREA(S) TO BE USED PRINCIPALLY FOR ACTION LEARNING

1. The Care and Guidance of Children Laboratory Area(s) should be planned:
   a. As independent unit(s) Yes No
   b. In combination with laboratory area(s) (specify) Yes No
   c. In combination with seminar area(s) Yes No
   d. In combination with lecture/demonstration area(s) Yes No
   e. As an area within a single multi-purpose space Yes No

2. Student capacity required for scheduled activities (See Form E)

3. Student and teacher activities in various space divisions within the care and guidance of children laboratory area(s). Indicate the extent to which each activity will occur.
   a. Outside play space
      1) Conducting children's games and activities 1 2 3 N
      2) Supervising children's activities 1 2 3 N
      3) 
   b. Inside nursery school play space
      1) Supervising indoor play 1 2 3 N
      2) 
      3) 
   c. Observation space or room
      1) Observing children and their activities 1 2 3 N
      2) 
      3) 
   d. Classroom space
      1) Conducting children's games and activities 1 2 3 N
      2) Directing quiet activities 1 2 3 N
      3) Teaching about the physical world through science experiences 1 2 3 N
      4) Supervising and teaching good health habits and safety 1 2 3 N
      5) 
   e. Isolation space
      1) Caring for sick children 1 2 3 N
      2) 
   f. Kitchen space
      1) Preparing food for children 1 2 3 N
      2) Serving food to children 1 2 3 N
      3) 

45
FORM H

g. Other space(s) (specify)________________ 1 2 3 N
1) ____________________________ 1 2 3 N
2) ____________________________ 1 2 3 N
3) ____________________________ 1 2 3 N

4. Spatial relationships. Indicate the extent to which spaces should be accessible to each other.

a. Within the care and guidance of children laboratory area(s)
   1) Outside play space to:
      a) Inside school play space 1 2 3 N
      b) Observation room 1 2 3 N
      c) Classroom space 1 2 3 N
      d) Toilet room(s) 1 2 3 N
      e) Isolation space 1 2 3 N
      f) Kitchen space 1 2 3 N
      g) Other (specify) ____________________________ 1 2 3 N

2) Inside nursery school play spaces:
   a) Observation room 1 2 3 N
   b) Classroom space 1 2 3 N
   c) Toilet room(s) 1 2 3 N
   d) Isolation space 1 2 3 N
   e) Kitchen space 1 2 3 N
   f) Other 1 2 3 N

3) Classroom space to:
   a) Toilet room(s) 1 2 3 N
   b) Isolation space 1 2 3 N
   c) Kitchen space 1 2 3 N
   d) Other 1 2 3 N

4) Toilet room(s) to:
   a) Isolation space 1 2 3 N
   b) Kitchen space 1 2 3 N
   c) Other 1 2 3 N

5) Isolation space to:
   a) Kitchen space 1 2 3 N
   b) Other 1 2 3 N

6) Kitchen space to:
   Other 1 2 3 N

b. Care and guidance of children laboratory area(s) to:
   1) Instructional materials center 1 2 3 N
   2) Building entrance 1 2 3 N
   3) Delivery area 1 2 3 N
   4) Other instructional areas 1 2 3 N
   5) Other building areas (specify) 1 2 3 N
      a) ____________________________ 1 2 3 N
      b) ____________________________ 1 2 3 N
      c) ____________________________ 1 2 3 N

5. Furniture and equipment

a. Gas ranges
   Number of ranges required __________

   P A NA

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**FORM H**

b. Electric ranges
   Number of ranges required
   
<table>
<thead>
<tr>
<th>P</th>
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c. Children's toilet
   1) Separation according to sex
   2) Number of water closets required
   3) Number of low sinks required
   
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d. Teachers desk
   1) Single-pedestal
   2) Double-pedestal
   3) Provision for storage
   
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e. Filing cabinets
   1) Legal-size drawers
   2) Number of drawers required
   3) Letter-size drawers
   4) Number of drawers required
   
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f. Magazine racks
   1) Number required
   2) Provision for storage
   
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g. Provision for darkening area(s)
   1) Opaque blinds
   2) Flexible room partitions
      a) Provision for storage
   
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h. Projection screen
   1) Wall-mounted
   2) Provision for storage
   
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</table>
i. Chairs for children
   1) Folding type
      a) Number required
      b) Provision for storage
   2) Straight-back type
      a) Number required
      b) Provision for storage
   
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<th>P</th>
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j. Tables for children
   1) Folding type
      a) Number required
      b) Provision for storage
   2) Permanent type
      a) Number required
      b) Provision for storage
   
<table>
<thead>
<tr>
<th>P</th>
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</table>
k. Classroom library shelving
   1) Fixed, open shelving
      Lineal feet required
   2) Movable, open shelving
      a) Lineal feet required
      b) Provision for storage
   3) Fixed, closed shelving
      Lineal feet required
   4) Movable, closed shelving
      a) Lineal feet required
      b) Provision for storage
   
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<th>NA</th>
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l. Student seating
   1) Individual desks and chairs
      a) Number of desks required
      
      | P | A | NA |
      |---|---|----|
      |   |   |    |
FORM H

b) Provision for storage

2) Permanent type
   a) Number required
   b) Provision for storage

3) Desk and chair combination
   a) Number required
   b) Provision for storage

4) Tables and chairs
   a) Number required
   b) Provision for storage

m. Carpet on indoor play area
n. Built-in locker for storage of children's coats, etc.
o. Low drinking fountain
   1) Inside
   2) Outside
p. Toys
   Provision for storage
q. Other equipment required for care and guidance of children laboratory area(s) are:
   1) 
   2) 
   3) 
   4) 

6. Environmental factors

a. Aesthetic. Factors to be considered in the aesthetic domain are colors, light, style of architecture, design and the like. Indicate any special aesthetic considerations important to the planning of the care and guidance of children laboratory area(s).

b. Aerial. Factors to be considered in this category include air temperature, radiant temperature, relative humidity, and ventilation. Indicate any special considerations important to the planning of the care and guidance of children laboratory area(s).

c. Visual. A properly controlled and balanced visual environment is important. The visual environment affects such things as accuracy in perception, attention to tasks, and speed of performance. Indicate any special factors which should be taken into account in planning the visual environment of the care and guidance of children laboratory area(s).
d. Safety. In planning school buildings, safety for pupils and teachers is of prime concern. Indicate any special safety considerations which have implications of the care and guidance of children laboratory area(s).

7. Vertical instructional surfaces
   a. Chalkboard
      1) Wall-mounted
         Number of lineal feet
         P A NA
      2) Portable
         a) Number of lineal feet
         b) Provision for storage
         Yes No
   b. Tackboard
      Number of lineal feet
      P A NA
   c. Pegboard
      Number of lineal feet

8. Special utility services required
   a. Electricity
      1) Ranges
         a) 110 V AC
         b) 220 V AC
         Yes No
      2) Special lighting requirements (specify)
         a)
         b)
         c)
         d)
      3) Electrical needs for other equipment (specify)
         a)
         b)
         c)
         d)
   b. Gas
      1) Ranges
      Yes No
      2) Other equipment using natural gas
         a)
         b)
   c. Water
      1) Drinking fountain(s)
      Yes No
      2) Sinks
      Yes No
      3) Garbage disposer
      Yes No
      4) Toilets
      Yes No
      5) Other (specify)

9. Minimum space requirements in square feet (optional)
   a. Floor area in square feet for entire child care and guidance laboratory area

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b. If distinct space divisions are desired according to function, give minimum floor area requirements in square feet for each of the following areas if included in desired program.

1) Outside play area
2) Inside nursery school play area
3) Observation room
4) Classroom space
5) Toilet area
6) Isolation area
7) Kitchen area
8) _______________________
9) _______________________

10. Other important factors to be considered in the planning of the child care and guidance laboratory area(s) are:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

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FORM I

DESCRIPTION OF FOODS LABORATORY AREA(S) TO BE USED PRINCIPALLY FOR ACTION LEARNING

1. The foods laboratory area(s) should be planned:
   a. As independent unit(s) Yes No
   b. In combination with laboratory area(s) (specify) Yes No
   c. In combination with seminar area(s) Yes No
   d. In combination with lecture/demonstration area(s) Yes No
   e. As an area within a single multi-purpose area(s) Yes No

2. Student capacity required for scheduled activities
   (See Form E)

3. Student and teacher activities in various space divisions within the Foods Laboratory area(s). Indicate the extent to which each activity will occur.
   a. Vegetable and meat sauce
      1) Planning menus 1 2 3 N
      2) Preparing food in quantity 1 2 3 N
      3) Cooking food in quantity 1 2 3 N
      4) Storing food 1 2 3 N
      5) ____________________________ 1 2 3 N
      6) ____________________________ 1 2 3 N
   b. Baking space
      1) Mixing baking ingredients 1 2 3 N
      2) Baking 1 2 3 N
      3) Storing baking products 1 2 3 N
      4) Cooling baking products 1 2 3 N
      5) ____________________________ 1 2 3 N
      6) ____________________________ 1 2 3 N
   c. Salad space
      1) Making such foods as salads, sandwiches, cold plates, beverages, and juices 1 2 3 N
      2) Making coffee 1 2 3 N
      3) ____________________________ 1 2 3 N
      4) ____________________________ 1 2 3 N
   d. Sanitation or dish and pot washing space
      1) Hand washing of dishes 1 2 3 N
      2) Machine washing of dishes 1 2 3 N
      3) Disposing of foods 1 2 3 N
      4) Scraping dishes 1 2 3 N
      5) ____________________________ 1 2 3 N
      6) ____________________________ 1 2 3 N
   e. Serving space
      1) Serving foods in quantity 1 2 3 N
         a) Cafeteria style P A NA
         b) Buffet style P A NA
         c) Formal style P A NA
         d) Family style P A NA
         e) Hospital style P A NA

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### FORM I

2) Busing dishes 1 2 3 N
3) Dining in groups 1 2 3 N
   a) Maximum size of group
   b) Dining in groups of seven or more P A NA
   c) Dining in groups of four to six P A NA
   d) Other (specify) P A NA

f. Laundry space
   1) Washing towels, linens, etc. 1 2 3 N
   2) Drying towels, linens, etc. 1 2 3 N
   3) ____________ 1 2 3 N
   4) ____________ 1 2 3 N

g. Other activities in food laboratory area(s) or related areas
   1) Screening pupils for occupations in the foods industry 1 2 3 N
   2) Applying knowledge of human nutrition 1 2 3 N
   3) Learning and practicing management processes 1 2 3 N
   4) Practicing health, safety, and sanitation procedures 1 2 3 N
   5) Participating in customer and employee-employer relationships 1 2 3 N
   6) Learning employment policies and practices 1 2 3 N
   7) Learning skills to be used as a waitress 1 2 3 N
   8) Learning skills to be used as a busboy 1 2 3 N
   9) ____________ 1 2 3 N
   10) ____________ 1 2 3 N

4. Spatial relationships. Indicate the extent to which spaces should be accessible to each other.

a. Within the Foods Laboratory area(s)

1) Vegetable and meat space to:
   a) Baking space 1 2 3 N
   b) Salad space 1 2 3 N
   c) Sanitation space 1 2 3 N
   d) Serving space 1 2 3 N
   e) Laundry space 1 2 3 N
   f) Classroom or related space 1 2 3 N
   g) Storage space
      (1) Dry storage 1 2 3 N
      (2) Refrigerated storage 1 2 3 N
      (3) Freezer storage 1 2 3 N

2) Baking space to:
   a) Salad space 1 2 3 N
   b) Sanitation space 1 2 3 N
   c) Serving space 1 2 3 N
   d) Laundry space 1 2 3 N
   e) Classroom or related space 1 2 3 N
   f) Storage space
      (1) Dry storage 1 2 3 N
      (2) Refrigerated storage 1 2 3 N
      (3) Freezer storage 1 2 3 N

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3) Sanitation space to:
   a) Salad space  
   b) Serving space  
   c) Laundry space  
   d) Classroom or related space  
   e) Storage space  
      (1) Dry storage  
      (2) Refrigerated storage  
      (3) Freezer storage  

4) Salad space to:
   a) Serving space  
   b) Laundry space  
   c) Classroom or related space  
   d) Storage space  
      (1) Dry storage  
      (2) Refrigerated storage  
      (3) Freezer storage  

5) Serving space to:
   a) Laundry space  
   b) Classroom or related space  
   c) Storage space  
      (1) Dry storage  
      (2) Refrigerated storage  
      (3) Freezer storage  

**b. Foods Laboratory area(s) to:**

1) Instructional materials center  
2) Building entrance  
3) Delivery area  
4) Other instructional areas  
   a)  
   b)  
   c)  
5) Other building areas  
   a)  
   b)  
   c)  

5. Furniture and Equipment

a. Bakery oven(s)
   1) Number required  
   2) Gas-fired  
   3) Electric  
   4) Electrical voltage(s) required  
   5) Ventilation hood required  
   6) Further description (capacity and other requirements)  

b. Restaurant dishwasher(s)
   1) Number required  
   2) Electrical voltage(s) required  
   3) Hot water  
   4) Steam  
   5) Further description (capacity and other requirements)  

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Volts

Yes:  
No:  

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### Form I

#### c. Table(s) on wheels for meatcutting, pastry, and breadwork
1) Number required
2) Provision for storage
3) Further description (dimensions of top, etc.)

#### d. Commercial range(s)
1) Number required
2) Gas-fired
3) Electric
4) Electrical voltage(s) required
5) Ventilation hood(s) required
6) Further description

#### e. Large mixer(s)
1) Number required
2) Electrical voltage required
3) Portable
4) Provision for storage
5) Further description

#### f. Tables for student classwork
1) Student capacity per table
2) Number required
3) Provision for storage
4) Further description

#### g. Student chairs
1) Number required
2) Provision for storage
3) Further description

#### h. Platform-type scale(s)
1) Number required
2) Capacity in pounds
3) Provision for storage
4) Further description

#### i. Reach-in storage freezer(s)
1) Capacity required
2) Electrical voltage required
3) Further description

#### j. Walk-in storage freezer
1) Capacity required
2) Electrical voltage required
3) Further description

#### k. Commercial refrigerator(s)
1) Gas
2) Electric
3) Electrical voltage required
FORM I

4) Number required
5) Further description

1. Demonstration table(s)
   1) Number required
   2) Portable
   3) Provision for storage
   4) Further description

   Yes
   No

   Yes
   No

   Yes
   No

m. Small refrigerator(s)
   1) Number required
   2) Gas
   3) Electric
   4) Electrical voltage required
   5) Capacity required
   6) Further description

   Yes
   No

   P
   A
   NA

   Volts

   sq. ft.

n. Portable hot and cold serving chart
   1) Number required
   2) Provision for storage
   3) Further description

   Yes
   No

   Yes
   No

o. Cafeteria serving counter
   1) Lineal feet required
   2) Further description

   Yes
   No

p. Bakery work table(s)
   1) Lineal feet required
   2) Further description

   Yes
   No

q. Portable bakery pan racks
   1) Number required
   2) Provision for storage
   3) Further description

   Yes
   No

r. Cooling racks for bakery products
   1) Number required
   2) Provision for storage
   3) Further description

   Yes
   No

s. Bakery mixer(s) with attachments
   1) Number required
   2) Electrical voltage required
   3) Portable
   4) Provision for storage
   5) Further description

   Yes
   No

   Volts

   Yes
   No

   Yes
   No

t. 25-inch spring scales
   1) Number required
   2) Provision for storage
   3) Further description

   Yes
   No

   Yes
   No
FORM I

u. Salad preparation table
   1) Stainless steel top
   2) Wood top
   3) Number required
   4) Further description

v. Dish scraping table
   1) Number required
   2) Further description

w. Pre-rinse spray sink with tray
   1) Hot and cold water
   2) Further description

x. Storage provision for clean dishes
   1) Shelves or racks
   2) Dish table(s)
   3) Other (specify)

y. Clothes washer(s)
   1) Number required
   2) Gas
   3) Electric
   4) Electrical voltage required
   5) Further description

z. Clothes dryer(s)
   1) Number required
   2) Gas
   3) Electric
   4) Electrical voltage required
   5) Further description

aa. Steam kettle
   1) Number required
   2) Capacity
   3) Utility requirements
   4) Further description

bb. Other major equipment needs for the foods laboratory area(s):

6. Environmental factors

a. Aesthetic. Factors to be considered in the aesthetic domain are colors, light, style of architecture, design and the like. Indicate any special aesthetic considerations important to the planning of the foods laboratory area(s).
b. Aerial. Factors to be considered in this category include air temperature, radiant temperature, relative humidity, and ventilation. Indicate any special considerations important to the planning of the foods laboratory area(s).

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

c. Visual. A properly controlled and balanced visual environment is important. The visual environment affects such things as accuracy in perception, attention to tasks, and speed of performance. Indicate any special factors which should be taken into account in planning the visual environment of the foods laboratory area(s).

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

d. Sonic. Factors to be considered in this category include such things as acoustical requirements and sound system. Indicate any special considerations important to the planning of the foods laboratory area(s).

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

e. Safety. In planning school buildings, safety for pupils and teachers is of prime concern. Indicate any special considerations which have implications for design of the foods laboratory area(s).

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

7. Vertical instructional surfaces

a. Chalkboard
   1) Wall-mounted
      Number of lineal feet
   2) Portable
      a) Number of lineal feet
      b) Provision for storage

b. Tackboard
   Number of lineal feet

c. Pegboard
   Number of lineal feet

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

8. Minimum floor areas required in square feet

a. Floor area in square feet for the entire foods laboratory area

b. If distinct space divisions are desired according to function, give minimum floor area requirements in square feet for each of the following areas if included in the desired program.
   1) Storage space
      a) Dry storage space

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
FORM I

b) Refrigerated storage space
   c) Freezer storage space
2) Vegetable and meat space
3) Baking space
4) Salad space
5) Sanitation or dish and pot washing space
6) Serving space
7) Laundry space
8) __________
9) __________

9. Other important factors to be considered in the planning of the foods laboratory area(s) are: __________________________
   __________________________
   __________________________
   __________________________
   __________________________
   __________________________
   __________________________
   __________________________
   __________________________
FORM J

DESCRIPTION OF CLOTHING LABORATORY AREAS (S)
TO BE USED PRINCIPALLY FOR ACTION LEARNING

1. The clothing laboratory area(s) should be planned:
   a. As independent unit(s) Yes No
   b. In combination with laboratory area(s) (specify) Yes No
   c. In combination with seminar area(s) Yes No
   d. In combination with lecture/demonstration area(s) Yes No
   e. As an area within a single multi-purpose space Yes No

2. Student capacity required for scheduled activities (see Form E)

3. Student and teacher activities in various space divisions within the clothing laboratory area(s). Indicate the extent to which each activity will occur.
   a. Laboratory space
      1) Learning to operate power sewing machines 1 2 3 N
      2) Using, caring, and storing sewing equipment and accessories 1 2 3 N
      3) Acquiring skill in constructing, designing and altering clothing and home furnishings 1 2 3 N
      4) Training for management of work in the commercial sewing industry 1 2 3 N
      5) Upholstering home furnishings 1 2 3 N
      6) Pressing materials and garments 1 2 3 N
      7) Using and caring for various textiles 1 2 3 N
      8) Selecting household textiles 1 2 3 N
      9) Caring and maintaining household textiles 1 2 3 N
     10) Practicing good grooming habits 1 2 3 N
     11) Practicing effective care in maintenance of clothing 1 2 3 N
     12) Constructing and altering personal and family clothing 1 2 3 N
     13) Exhibiting and evaluating clothing activities 1 2 3 N
     14)                                             1 2 3 N
     15)                                             1 2 3 N
   b. Fitting area
      1) Trying on garments that have been constructed in the clothing laboratory 1 2 3 N
      2) Practicing good grooming habits 1 2 3 N
      3) Modeling various articles of apparel 1 2 3 N
      4) Making necessary alterations of apparel 1 2 3 N
      5)                                             1 2 3 N
      6)                                             1 2 3 N
FORM J

c. Classroom space
1) Acquiring knowledge of design and principles of art as related to commercial sewing and alterations 1 2 3 N
2) Learning the influence of textiles on the choice of construction methods and techniques of alterations 1 2 3 N
3) Exploring the world of work in the clothing field 1 2 3 N
4) Studying and testing fibers and fabrics 1 2 3 N
5) Learning and applying the principles of fashion and design 1 2 3 N
6) Selecting clothing and planning wardrobe needs 1 2 3 N
7) ________________________________ 1 2 3 N
8) ________________________________ 1 2 3 N
d. Other activities in the clothing laboratory area(s) or related areas
1) ________________________________ 1 2 3 N
2) ________________________________ 1 2 3 N
3) ________________________________ 1 2 3 N
4) ________________________________ 1 2 3 N

4. Spatial relationships. Indicate the extent to which spaces should be accessible to each other.

a. Within the clothing laboratory area(s)
1) Laboratory to:
   a) Fitting area 1 2 3 N
   b) Classroom 1 2 3 N
2) Fitting area to:
   a) Classroom 1 2 3 N
   b) Fitting area should be part of laboratory area and not a separate room 1 2 3 N
3) Other important special relationships within the clothing laboratory area(s).
   ____________________________________________________________
   ____________________________________________________________

b. Clothing laboratory areas to:
1) Instructional materials center 1 2 3 N
2) Building entrance 1 2 3 N
3) Delivery area 1 2 3 N
4) Other instructional areas 1 2 3 N
5) Other building areas (specify)
   a) ________________________________ 1 2 3 N
   b) ________________________________ 1 2 3 N

5. Furniture and equipment

a. Power sewing machine(s) Yes No

1) Number required

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FORM J

2) Electrical voltage required _____________________________ Volts
3) Further description ______________________________________

b. Button-hole machine(s)
1) Number required _____________________________
2) Electrical voltage required ______________ Volts
3) Provision for storage required Yes No
4) Further description ______________________________________

c. Over-edging machines
1) Number required _____________________________
2) Electrical voltage required ______________ Volts
3) Provision for storage required Yes No
4) Further description ______________________________________

d. Cutting table(s)
1) Number required _____________________________
2) Metal tops _____________________________
3) Wood tops _____________________________
4) Provision for storage required Yes No
5) Portable _____________________________
6) Further description ______________________________________

  P  A  NA

 e. Ironing board(s)
1) Number required _____________________________
2) Provision for storage Yes No
3) Further description ______________________________________

  Yrs  No

f. Power press
1) Number required _____________________________
2) Provision for storage required Yes No
3) Further description ______________________________________

g. Steam Press (upright)
1) Number required _____________________________
2) Further description ______________________________________

  Yes  No

h. Full-size dress form
1) Number required ________

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FORM J

2) Provision for storage
3) Further description

Yes No

i. Half-scale form
1) Number required
2) Provision for storage
3) Further description

Yes No

j. Teachers desk(s)
1) Number required
2) Provision for storage
3) Further description

Yes No

k. File cabinets
1) Number of file drawers required
2) Legal size
3) Letter size
4) Further description

P A NA

l. Student chairs
1) Number required
2) Folding-type
3) Provision for storage
4) Further description

P A NA

m. Student tables
1) Number required
2) Folding-type
3) Provision for storage
4) Further description

P A NA

n. Other major equipment needs for the clothing laboratory area(s).

6. Environmental factors
   a. Aesthetic. Factors to be considered in the aesthetic domain
are color, light, style of architecture, design and the like. Indicate any special aesthetic considerations important to the planning of the clothing laboratory area(s).

b. Aerial. Factors to be considered in this category include air temperature, radiant temperature, relative humidity, and ventilation. Indicate any special considerations important to the planning of the clothing laboratory area(s).

c. Visual. A properly controlled and balanced visual environment is important. The visual environment affects such things as accuracy in perception, attention to tasks, and speed of performance. Indicate any special factors which should be taken into account in planning the visual environment of the clothing laboratory area(s).

d. Sonic. Factors to be considered in this category include such things as acoustical requirements and sound system. Indicate any special considerations important to the planning of the clothing laboratory area(s).

e. Safety. In planning school buildings, safety for pupils and teachers is of prime concern. Indicate any special safety considerations which have implications for design of the clothing laboratory area(s).

7. Vertical instructional surfaces

a. Chalkboard
   1) Wall-mounted
      a) Number of lineal feet
   2) Portable
      a) Number of lineal feet
      b) Provision for shortage

b. Tackboard
   1) Number of lineal feet

c. Pegboard
   1) Number of lineal feet
FORM J

8. Minimum floor areas required in square feet

a. Floor area in square feet for the entire clothing laboratory area(s) ______

b. If distinct space divisions are desired according to function, give minimum floor area requirement in square feet for each of the following areas, if included in the desired program:

1) Laboratory space ______

2) Fitting room ______

3) Classroom ______

4) ______

5) ______

9. Other important factors to be considered in the planning of the clothing laboratory area(s) are:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
DESCRIPTION OF HOME FURNISHINGS LABORATORY AREA(S)
TO BE USED PRINCIPALLY FOR ACTION LEARNING

1. The home furnishings, equipment, and services laboratory area(s) should be planned:
   a. As independent unit(s)                      Yes  No
   b. In combination with laboratory area(s)    Yes  No (specify)
   c. In combination with lecture/demonstration area(s) Yes  No
   d. In combination with seminar area(s)       Yes  No
   e. As an area within a single left-type space Yes  No

2. Student capacity required for scheduled activities (see Form E)

3. Student and teacher activities within the home furnishings, equipment, and service laboratory area(s). Indicate the extent to which each activity will occur.
   a. Upholstering home furnishings              1  2  3  N
   b. Preparing surfaces for finishing           1  2  3  N
   c. Finishing surfaces                         1  2  3  N
   d. Installing springs, webbing, etc.          1  2  3  N
   e. Planning and cutting material              1  2  3  N
   f. Removing finishes                          1  2  3  N
   g. Preparing advertising displays             1  2  3  N
   h. Designing household interiors              1  2  3  N
   i. Architectural drawing                      1  2  3  N
   j. ________________________________________
   k. ________________________________________
   l. ________________________________________
   m. ________________________________________
   n. ________________________________________

4. Spatial relationships. Indicate the extent to which spaces should be accessible to each other. The home furnishings, equipment, and service laboratory area(s) to:
   a. Instructional material center               1  2  3  N
   b. Building entrance                          1  2  3  N
   c. Delivery area                              1  2  3  N
   d. Other building areas
      1) ________________________________________ 1  2  3  N
      2) ________________________________________ 1  2  3  N
      3) ________________________________________ 1  2  3  N
   e. Other instructional areas
      1) ________________________________________ 1  2  3  N
      2) ________________________________________ 1  2  3  N
      3) ________________________________________ 1  2  3  N
FORM K

5. Furniture and equipment

a. Work bench
   1) Lineal feet required
   2) Metal top
   3) Wood top
   4) Storage under
   5) Further description

b. Drying space
   1) Fan for ventilation
   2) Storage for finishes, etc.
   3) Further description

c. Tables for planning and cutting materials
   1) Number required
   2) Work surface in sq. ft.
   3) Metal top
   4) Wood top
   5) Storage under
   6) Further description

d. Architectural drafting table(s)
   1) Number required
   2) Special lighting above
   3) Further description

e. Other furniture and equipment for the home furnishings, equipment, and service laboratory area(s) are (give descriptions and quantities)

6. Environmental factors

a. Aesthetic. Factors to be considered in the aesthetic domain are colors, light, style of architecture, design and the like. Indicate any special aesthetic considerations important to the planning of the home furnishings laboratory area(s).

b. Aerial. Factors to be considered in this category include air temperature, radiant temperature, relative humidity,
c. Visual. A properly controlled and balanced visual environment is important. The visual environment affects such things as accuracy in perception, attention to tasks, and speed of performance. Indicate any special factors which should be taken into account and planning the visual environment of the home furnishings laboratory area(s).

---

d. Sonic. Factors to be considered in this category include such things as accoustical requirements and sound systems. Indicate any special considerations important to the planning of the home furnishings laboratory area(s).

---

e. Safety. In planning a school building, safety for pupils and teachers is of prime concern. Indicate any special safety considerations which have implications for design of the home furnishings laboratory area(s).

---

7. Vertical instructional surfaces

a. Chalkboard
   1) Wall-mounted
      a) Number of lineal feet
   2) Portable
      a) Number of lineal feet
      b) Provision for storage

b. Tackboard
   1) Number of lineal feet

c. Pegboard:
   1) Number of lineal feet

---

8. Minimum space requirements in square feet for the home furnishings, equipment, and service laboratory area(s).

---

9. Other important factors to be considered in the planning of the home furnishings laboratory area(s) are:

---

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**FORM L**

**DESCRIPTION OF INSTITUTIONAL AND HOME MANAGEMENT LABORATORY AREAS TO BE USED PRINCIPALLY FOR ACTION LEARNING**

1. The institutional and home management laboratory area(s) should be planned:
   
   a. As an independent unit(s)  
   b. In combination with laboratory area(s).  
      (specify)  
   c. In combination with seminar area(s)  
   d. In combination with lecture/demonstration area(s)  
   e. As an area within a single multi-purpose space

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2. Student capacity required for scheduled activities (see Form E)

3. Student and teacher activities in various space divisions within the institutional and home management laboratory area(s). Indicate the extent to which each activity will occur.

   a. Home housekeeping space
      1) Acquiring skills and techniques of washing and ironing  
      2) Understanding and caring for children  
      3) Acquiring skills and techniques of cleaning  
      4)                                    1 2 3 N  
      5)                                    1 2 3 N

   b. Commercial housekeeping space
      1) Understanding and acquiring skills to handle equipment, such as dishwashers, vacuum cleaners, rug cleaners, floor waxes, and laundry equipment  
      2)                                    1 2 3 N  
      3)                                    1 2 3 N

   c. Textiles space
      1) Machine sewing  
      2) Hand sewing  
      3)                                    1 2 3 N
      4)                                    1 2 3 N

   d. Health service space
      1) Learning accident prevention  
      2) Handling emergencies  
      3) Caring for sick and elderly patients  
      4) Acquiring desirable personal habits  
      5)                                    1 2 3 N  
      6)                                    1 2 3 N

   e. Kitchen space
      1) Preparing foods  
      2) Planning meals  
      3)                                   1 2 3 N  
      4)                                   1 2 3 N

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FORM L

3) Purchasing foods
4) Storing foods
5) ____________________________

f. Laundry space
1) Washing clothes, linen, etc. 1 2 3 N
2) Drying clothing, linen, etc. 1 2 3 N
3) ____________________________ 1 2 3 N
4) ____________________________ 1 2 3 N

g. Other activities in institutional and home management laboratory area(s)
1) ____________________________ 1 2 3 N
2) ____________________________ 1 2 3 N
3) ____________________________ 1 2 3 N
4) ____________________________ 1 2 3 N

4. Spatial relationships. Indicate the extent to which the spaces should be accessible to each other.

a. Classroom space to:
1) Home housekeeping 1 2 3 N
2) Commercial housekeeping 1 2 3 N
3) Textile space 1 2 3 N
4) Health service space 1 2 3 N
5) Bath 1 2 3 N
6) Kitchen space 1 2 3 N
7) Laundry space 1 2 3 N
8) Walk-in storage space 1 2 3 N

b. Home housekeeping space to:
1) Commercial housekeeping space 1 2 3 N
2) Textile space 1 2 3 N
3) Health service space 1 2 3 N
4) Bath 1 2 3 N
5) Kitchen space 1 2 3 N
6) Laundry space 1 2 3 N
7) Walk-in storage space 1 2 3 N

c. Commercial housekeeping space to:
1) Textile space 1 2 3 N
2) Health service space 1 2 3 N
3) Bath 1 2 3 N
4) Kitchen space 1 2 3 N
5) Laundry space 1 2 3 N
6) Walk-in storage space 1 2 3 N

d. Textile space to:
1) Health service space 1 2 3 N
2) Bath 1 2 3 N
3) Kitchen space 1 2 3 N
4) Laundry space 1 2 3 N
5) Walk-in storage space 1 2 3 N

e. Health service space
1) Bath 1 2 3 N
2) Kitchen space 1 2 3 N
3) Laundry space 1 2 3 N
4) Walk-in storage space 1 2 3 N
f. Bath to:
1) Kitchen space
2) Laundry space
3) Walk-in storage space

g. Kitchen to:
1) Laundry space
2) Walk-in storage space

h. Laundry to:
1) Walk-in storage space

i. Institutional and home management laboratory area(s) to:
1) Instructional material center
2) Building entrance
3) Delivery area
4) Other instructional areas (specify)
   a) 
   b) 
   c) 
5) Other building areas (specify)
   a) 
   b) 
   c) 

5. Furniture and equipment
a. Portable demonstration table
   1) Number required
   2) Further description

b. Sinks with hot and cold running water
   1) Number required
   2) Further description

c. Sorting table(s)
   1) Number required
   2) Provision required for storage required
   3) Further description

d. Student tables
   1) Number required
   2) Folding type
   3) Provision for storage required
   4) Further description

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FORM L

e. Student chairs
1) Number required
2) Folding type
3) Provision for storage required
4) Further description

f. Bookshelves
1) Number of lineal feet required
2) Open shelving
3) Closed shelving
4) Further description

g. Dining room and living room furnishings
1) Further description

h. Irons
1) Number required
2) Provision for storage
3) Further description

i. Ironing boards
1) Number required
2) Provision for storage
3) Further description

j. Sewing machines
1) Number required
2) Electrical voltage required
3) Provision for storage
4) Further description

k. Water-heater booster
1) Number required
2) Further description

l. Roll-away bed with cover
1) Number required
2) Provision for storage

Yes No
FORM L

3) Further description

m. Privacy screens
1) Number required
2) Provision for storage
3) Further description

n. Hospital bed, hand-operated type, mattress included
1) Number required
2) Provision for storage
3) Further description

o. Hotel cleaning supply cart
1) Number required
2) Provision for storage
3) Further description

p. Refrigerator-freezer
1) Number required
2) Gas
3) Electric
4) Electrical voltage required
5) Further description

q. Washing machine
1) Number required
2) Gas
3) Electric
4) Electric voltage required
5) Further description

r. Dryer
1) Number required
2) Gas
3) Electric
4) Electrical voltage required
5) Further description

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FORM L

s. Dishwasher
   1) Number required
   2) Electrical voltage required
   3) Further description

   Yes No

   ____________ Volts

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

   t. Disposer
   1) Number required
   2) Electrical voltage required
   3) Further description

   Yes No

   ____________ Volts

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

   u. Range
   1) Number required
   2) Gas
   3) Electric
   4) Electrical voltage required
   5) Further description

   Yes No

   P A NA
   P A NA

   ____________ Volts

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

   v. Sweepers
   1) Number required
   2) Further description

   Yes No

   ________

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

   w. Scrubber and Polisher combination
   1) Number required
   2) Further description

   Yes No

   ________

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

   x. Carpet Shampooer
   1) Number required
   2) Further description

   Yes No

   ________

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

   y. Other equipment required for the institutional and home
   management laboratory area(s). Give description in
   quantities: ________________________________

   ________________________________

   ________________________________

   ________________________________

   6. Environmental factors

   a. Aesthetic. Factors to be considered in the aesthetic are
   colors, light, style of architecture, design and the like.
   Indicate any special aesthetic considerations important
FORM L

to the institutional and home management laboratory area(s).

b. **Aerial.** Factors to be considered in this category include air temperature, radiant temperature, relative humidity, and ventilation. Indicate any special considerations important to the institutional and home management laboratory area(s).

c. **Visual.** A properly controlled and balanced visual environment is important. The visual environment affects such things as accuracy in perception, attention to tasks and speed of performance. Indicate any special factors which should be taken into account in planning the visual environment of the institutional and home management laboratory area(s).

d. **Sonic.** Factors to be considered in this category include such things as acoustical requirements and sound system. Indicate any special considerations important to the planning of the institutional and home management laboratory area(s).

e. **Safety.** In planning school buildings, safety for pupils and teachers is of prime concern. Indicate any special safety considerations which have implications for design of the institutional and home management area(s).

7. **Vertical instructional surfaces**

   a. **Chalkboard**
      1) Number of lineal feet
      2) Wall-mounted
      3) Portable
      4) Provision for storage

   b. **Tackboard**
      1) Number of lineal feet

   c. **Pegboard**
      1) Number of lineal feet

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FORM L

8. Minimum floor areas required in square feet (optional)

a. Floor area in square feet for the entire institutional and home management laboratory area(s).

b. If distinct space divisions are desired according to function, give minimum floor area requirements in square feet for each of the following areas if included in the desired program.

1) Teaching space
2) Home housekeeping space
3) Commercial housekeeping space
4) Textile space
5) Health service space
6) Bath
7) Kitchen space
8) Laundry space
9) Walk-in storage space
10)
11)

9. Other important factors to be considered in the planning of the institutional and home management laboratory are:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
FORM M

ADDITIONAL PLANNING CONSIDERATIONS

Other important factors to be considered in the overall planning and design of instructional areas for the planned home economics occupational preparation program(s) are:

1.

2.

3.

4.

5.

6.

7.

8.
PART IV

ANNOTATED BIBLIOGRAPHY

GENERAL FACILITY PLANNING


Contributors to this publication were teachers, supervisors, administrators, architects, engineers, school board members, and school plant planning specialists. In addition to background material on school house construction, the book deals with specific topics including school surveys, analysis and computation of space and facility needs, enrollment projections, building designs, site selection, finance, and building maintenance and operation. Many pictures and illustrations are found, along with sample forms and outlines, which can be used in the facility planning process. No special consideration is given to unique problems faced in the planning for vocational and technical education facilities.


A textbook on overall planning procedures for new and improved school facilities. The typical topics (school surveys, building planning, site selection and acquisition, architectural planning, contracting for construction, and the equipping and furnishing of buildings) are covered. The only mention of vocational schools is on page 270 where the author quotes from another source:

Vocational training should be de-emphasized in the schools since this training often becomes obsolete before it can be used; also, special "trade" and "vocational" schools should be discontinued, unless the vocational curriculum is liberal in approach and broad in character. Such schools are often used as dumping grounds for students who are not wanted elsewhere and often more than custodial care is provided for them. When more is provided, the skills taught are frequently too partial in nature.

A book prepared for the inexperienced school planner. The author emphasizes that a school building is an educational tool and should be designed to do the job they are intended to do. The four steps discussed are: 1) district-wide building survey, 2) educational planning, 3) architectural planning and construction, and 4) moving in and settling down. A glossary of important terms used in plant planning is located in the back of the book.


A compilation of references in the following categories: general references; periodicals; overview of school plant field, district-wide building survey; educational planning; the architect and his work; moving in and settling down; and related topics.


This manual is intended to assist officials of school districts who are planning programs for maximum use of school properties and who must develop policies and regulations for efficient management of such programs. Various schedules of facility use are illustrated for nine different school systems.


This work is designed to meet the needs of three distinct groups interested in providing educational facilities. Report A: "A Guide for Policy Makers" is directed to boards, administrators, planning committees, and institutional planners. Report B: "A Guide for the Design of Professions" is designed for architects, planners, and design specialists and planning committees; and Report C: "A Technical Guide" is intended for design-architects, engineers, equipment and furniture suppliers, and media specialists.


A basic reference on school plant planning and construction for use by superintendents, school board members, school plant planners, state department of education personnel, local school system officials, collegiate institutions, architects, lay advisory groups, and graduate students. Major topics covered are: planning and programming educational plants, spaces and equipment for learning, non-instructional systems,
space organization, and economy and resources. Much attention is given to plant planning through a description of a survey technique used to determine and satisfy school plant needs for a community. Site selection, kinds of instructional space, sonic, thermal, and visual environments, and best use of natural and plant resources are also treated.

North Carolina. Department of Public Instruction. A Digest of Educational Planning. Raleigh. The contents of this book include a description of what educational planning is, when it is done, who does it, and how it is done. The three steps of planning are identified as (1) identification and analysis of educational and facility needs, (2) adapting and implementing plant improvement programs, and (3) completing and evaluating a process of the educational planning.

North Carolina. Department of Public Instruction, The Division of School Planning. School \textit{design}. Raleigh. Basic principles of school design is the thrust of this publication. It focuses on the interrelationship of patterns of school activities, organization of activities on the site, design potentials for various sites, and the building design data necessary for communicating the school's needs to the architect.

School Planning Laboratory. \textit{Spectrum of Electronic Teaching Aids in Education}. Stanford, California: Stanford University, 1965. This publication seeks to suggest which learning functions can be served electronically, to symbolize the nature and progressive complexity of each electronic system, and finally to estimate budgets which will provide for adequate systems in relation to engineering and warranty costs.

Strevell, Wallace H., and Burke, Arvid J. \textit{Administration of the School Building Program}. New York: McGraw-Hill Book Company, Inc., 1959. A comprehensive textbook on the administration of the school plant program. The book is organized into three major parts: Part I-"Policy Decisions" deals with school building needs studies and long-range planning; Part II--"Program Recommendations" deals with local study of plant needs, evaluation of existing plant, determination of additional plant needs, site selection and development, and the preparation of educational specifications. Part III--"Project Administration" is concerned with the financial aspects of a building program and with public relations. There is a brief mention of the objectives of vocational education as contrasted with the objectives of general education on page 12.

This book deals with the cost of a schoolhouse and the process of planning and financing it. It provides median costs for various building elements, designates individual responsibilities in process of building, and discusses arrangement of space and environmental factors.

VOCATIONAL-TECHNICAL FACILITY PLANNING


The purpose of this publication is to reduce the broad principles and processes of school plant planning to those most applicable to vocational and practical arts education. Effective techniques for developing educational specifications are suggested. The committee provides a sequential treatment of program and administrative considerations, desired space and educational program, special site arrangement features, special physical aspects of building, and the financial requirements for the project.


A study of related literature on programmed instruction, instructional films, instructional television, and learning from various instructional media. It analyzes new instructional media approaches used at North Carolina's Fundamental Learning Laboratories System, and the integrated experience approach at Oakland Community College.


A general guide that describes important steps to be followed in the planning for and construction of vocational and technical education facilities. Important topics covered are: the impact of the Vocational Education Act of 1963; surveys of area educational needs; use of consultant services; basic planning considerations; educational specifications; general planning; and school construction cost and outlay. Sample floor plans and picture illustrations of vocational schools are included.

An account of the procedures followed in the establishment of a technical college within a period of less than 90 days. The entire planning process and implementation is described along with the PERT technique which was applied. The author concluded the PERT (Program Evaluation and Review Technique) was effective in assisting the planners in reaching their objectives within a short period of time.


The pamphlet emphasizes the need for a total flexibility concept in school building. Consideration is given to the use of building components to provide flexibility in space, lighting, air-conditioning, sewage system, and the like.


A report on new trends in the construction of vocational education facilities. Among topics covered are occupational clusters, teaching techniques such as micro-teaching and educational television, facilities for handicapped children, educational parks, and unique problems faced by large city school systems. Special consideration is given to maximum utilization of vocational education facilities on an around-the-clock basis.


A report which relates the thinking of six outstanding consultants on various topics relating current trends in vocational-technical education and facility planning. Reviews the work of a local consortium consisting of three Center vocational specialists, three school plant planners, three representatives from the State Department of Education, three local school officials, and three practicing architects in defining problems, clarifying issues, suggesting approaches to organizing planning guides, and establishing guidelines for a series of facility planning guides in selected vocational and technical subject areas.

Wohlers, A. E. A Manual for Planning A Secondary School Building (Vocational Education). Columbus, Ohio: The Administration and Facilities Unit, School of Education, The Ohio State University, Pamphlet C-14

A general facility planning guide for programs of vocational education. Principal topics covered include: 1) number of teaching stations, 2) types of teaching stations, 3) equipment needs, and 4) floor areas required. The planning manual also deals with spatial relationships of teaching facilities and
the utilization of auxiliary areas such as libraries, cafeterias, and administrative suites. Planners using the guide are directed to complete checklists and fill-in blanks with the necessary information pertinent to vocational facility planning.

HOME ECONOMICS FACILITY PLANNING


This publication is a report of a "national effort to utilize concepts both as a means of defining the structure of home economics and as a basis for effective teaching." Important concepts and generalizations are given as well as their implications for the various aspects of home economics instruction. The major headings under which the concepts and generalizations appear: 1) Human Development in the Family; 2) Home Management and Economics; 3) Foods and Nutritition; 4) Textiles and Clothing; 5) Housing.


This publication is primarily a curriculum guide for home economics in the State of Florida. It consists, for the most part, of subject matter scope, sequence charts and recommended time allotments. The charts are preceded by background material concerned with societal changes and recent educational emphases in general and home economics education in particular.


Within this publication are found some provocative ideas about curriculum and facilities. Included is a plan for integrating home economics into the general education program, a discussion on needed flexibility to meet new challenges in home economics education, and an analysis of the vocational purposes of home economics.


An itemized list of equipment requirements for the vocational service areas of trade, and industry, distributive education, office occupations, health occupations, home economics, and agriculture.

This guide provides a comprehensive analysis of facility planning for a high school vocational home economics program covering such topics as 1) principles in planning space and facilities, 2) planning the home economics department, 3) location and arrangement of spaces, 4) general features of activities or work centers, 5) storage, 6) equipment and furniture, and 7) a discussion of requirements in the areas of atmosphere, lighting, floors, counter surfaces, wiring, and small equipment.


A bulletin prepared to assist school administrators, architects, teachers, and others plan and develop programs in high schools and joint vocational schools. According to the authors, the facilities "suggested" are adequate for programs for high school youth, and adults for employment in occupations utilizing home economics knowledge and skills. Space requirements in square feet, needed equipment, approximate equipment costs and sample floor plans are offered. A bibliography of materials which may be useful to planners of vocational home economics facilities is found in this publication.


This publication is concerned with educational trends and concepts which affect home economics, current developments in the home economics curriculum and their implications for space and facilities. It contains sections on how to plan the specific needs for each curriculum area; specialized furniture and equipment requirements and the general physical environmental considerations.


This bulletin is designed to give assistance to school administrators, architects, and home and family life teachers as they plan renovations of existing facilities and construction of new home economics facilities, in secondary and post-secondary programs. Check sheets for planning, suggestions for writing educational specifications, and a work sheet for evaluating preliminary designs are included.
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