Family and Consumer Sciences Education

Facilities Guide

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Regents of The University

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The environment created by physical facilities is a significant factor in learning. Therefore, efforts must be made to assure the facilities support New York State Learning Standards as well as the National Family and Consumer Sciences Education Standards. A special thank you goes to the New York State Association of Family and Consumer Sciences Educators board for their foresight and direction in coordinating this project. Numerous educators listed below contributed to the development of this document to assist school districts in providing sound educational facilities and equipment for Family and Consumer Sciences Education.

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FOREWORD

The Office of Curriculum and Instructional Support is responsible for implementing and supervising the Family and Consumer Science Education curriculum. The highly specialized nature of the Family and Consumer Sciences curriculum requires that facilities be appropriately planned and supervised by a certified Family and Consumer Sciences educator. This publication provides guidelines to help those responsible for space and facilities to direct the planning of safe learning environments that will support and promote the goals of Career and Technical Education as well as the NYS Learning Standards, the National Family & Consumer Science Standards, and the No Child Left Behind initiative.

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INTRODUCTION

The architectural space sets the educational tone and is the first impression students receive when they enter the environment of a Family and Consumer Sciences facility. The space must be safe and adaptable to a variety of activities for a continually evolving curriculum within a changing society.

The environment created by physical facilities is a significant factor in learning. Considering the Family and Consumer Sciences curriculum recommendation that 75 percent of grades 5-8 instruction be hands-on, a well designed environment can ensure student safety, foster positive attitudes toward work and, at the same time, support the competencies essential to employment and life management.

This document is designed to assist chief school administrators, school business administrators, building level administrators teachers, advisory committees, and architects in planning and selecting space and equipment best suited to Family and Consumer Sciences department needs.

It is important to include that users of the facilities can make important contributions to planning and coordination. In addition, because of the array and depth of courses and multipurpose room use, the various integrated programs being taught will vary from district to district. An analysis of local needs is essential in making the final plan. For further information, contact the New York State Education Department's Office of Curriculum and Instructional Support (518) 486-1547 or send an e-mail to emsccte@mail.nysed.gov

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Part I

THE CURRICULUM

The Curriculum

The Family and Consumer Sciences Curriculum contains a strong emphasis on developing Process Skills in Career and Technical Education Content Areas. The framework includes:

Grades 5,6,7,8 — Home and Career Skills Course (3/4 – 1 unit)

This course focuses on the process skills of communication, leadership, management and thinking within the context of career development, clothing management, community connections, consumer resource management, family, financial management, human development, interpersonal relationships, nutrition and wellness, and personal environment management. It is recommended that instruction be 75 percent hands-on learning experiences.

Grades 9-12 — Career and Financial Management Course (1 unit)

This course is required as part of every Career and Technical Education (CTE) program including five-unit CTE programs used as a substitution for the additional two units of foreign language needed for the Regents diploma with advanced designation. The Career and Financial Management content can be met either as a separate course or integrated into other courses in a CTE sequence. A hands-on approach is integral to the program.

Part A of the Career and Financial Management half-unit course provides students with the opportunity to learn about the features of our economy, explore a variety of careers, learn skills and competencies needed for success in the workplace, and to begin to become financially literate.

Part B of the Career and Financial Management requirement can be met by a student taking one-half unit of any career and technical education curriculum that either introduces students to a cluster of occupations or develops skills appropriate for a cluster of occupations.

Career and Financial Management has also been developed to allow students to begin to meet the Career Development and Occupational Studies (CDOS) Learning Standards at the commencement level. Students will be encouraged to begin or continue to develop a career plan familiar with the universal foundation skills (SCANS skills) that are needed to become successful citizens, employers, and employees.

All teachers certified to teach any subject in CTE in New York State are certified to teach this course.

Grades 9-12

Family and Consumer Sciences Clusters These clusters are the Family and Consumer Sciences, Career and Technical Education (CTE) program that can be used in a five-unit CTE program as a substitution for the additional two units of foreign language needed for the Regents diploma with advanced designation. In addition these courses are also used to fulfill academic and elective commencement requirements.

- Home and Personal Management Sequence focuses on personal, family, community living and working in a diverse global society.

- Human Services and Family Studies Sequence contains content information, practical skills, and career exploration related to growth and development throughout the human life cycle. A critical part of this program is direct experience with people of all ages, particularly young children.

- Food and Nutrition Sequence emphasizes human nutrition throughout the life cycle and food preparation and food service in the family and commercial, and hospitality settings. Laboratory experiences are essential to this program.

- Textiles and Design: Apparel and Environment Sequence pursues three strands of Career and Technical Education development: clothing design and production, fashion retailing, and interior furnishings and design. Laboratory experiences are an indispensable part of these courses.

Classrooms, Laboratories, and Equipment

Facilities for teaching the above curriculum will be, for the most part, the classrooms in which Family and Consumer Sciences courses have been taught in the past. With modifications, these classrooms should serve the instructional process very well.

In the Middle School/Junior High School, flexibility and adaptability are the key words in redesigning the facility. It is suggested that several multipurpose rooms be created. The Home and Career Skills laboratory/classroom should have a resource management center, a food and nutrition center, a textile and design center, a career information center, and a classroom area. The use of portable equipment that can be stored out of sight when not in use would make this a real multipurpose room. The center of the classroom would then remain free for large and small group activities.

The Family and Consumer Sciences high school level clusters, from the introductory CORE courses to the more advanced courses, must be taught in facilities that allow for classrooms to be supplemented with laboratory settings. In designing facilities for these programs, the departmental approach seems ideal: a series of interrelated, interconnecting rooms that provide flexible classroom space, laboratory space for food and nutrition, textiles/apparel and housing experiences, and space for human development experiences, including activities with people of various ages from infants to the elderly. The addition of appropriately placed storage and laundry space makes this department complete. The total number of classrooms would depend upon the number of students and staff to be served.

Due to the nature of all programs, the availability of a wide variety of instructional media, technology, and computer equipment will greatly enhance the effectiveness of instruction. All classroom areas should be designed to accommodate the use of such equipment.

Effective Learning Environment

Factors Influencing Space Planning

Whether or not a facility can provide an environment conducive to learning depends upon three interdependent factors:

- the relative time to be devoted to teaching strategies;
- equal access for all students; and
- the degree to which a space is used for a specialized purpose, such as commercial food preparation, vis-à-vis the multipurpose use of the same space.

Learning Modes

The three typical learning modes – individual learning, interactive learning, and reactive learning are included in the various teaching strategies. Each of these modes requires a different kind of space.

- Individual learning requires adequate space as dictated by the learning activity. Students learn by active involvement in the application of processes. The teacher assists and acts as facilitator.
- Interactive learning requires small group space and lab space. Students learn by interacting with one another and with the teacher, as the teacher encourages all of the process skills.
- Reactive learning requires large group space. Students learn primarily by listening, observing, and writing. The teacher presents information to the entire class using a variety of instructional media, technology, and other teaching aids to enhance instruction.

It is important when planning facilities for the Family and Consumer Sciences curriculum to keep to a minimum the amount of space assigned to one specific use. Use of portable equipment and multipurpose space allows much more flexibility. Flexibility is of greatest importance in the space where Home and Career Skills will be taught because of the breadth of experiences involved.

Part II

THE SPACE

The facilities should ensure safety, exemplify the principles of good management and convey an immediate visual impression of logical order and planned arrangement. They should represent standards that are attainable in the community, while reflecting new developments in equipment and furnishing. Hands-on experiences must be incorporated into the curriculum at each level, as well as the space to accommodate these experiences.

When designing multipurpose space that will accommodate all three modes of learning, consideration should be given to the following points:

1. The instructor should have a complete view of the area being used at all times, for safety as well as instructional reasons.
2. The entire area should be without partitions, posts, or other barriers, to the greatest extent possible.
3. Traffic patterns should be planned to ensure safe and orderly passage.
4. Stationary units to be used in resource management experiences related to foods, clothing, and environments should be arranged around the perimeter of the laboratory, rather than projecting into it.
5. Space should be planned considering varied size of students, physical needs, and any special space requirements for physical aids.

<u>General Planning Guidelines</u>

Given the nature of the Family and Consumer Sciences curriculum, a number of basic underlying assumptions can be made about the space and facilities necessary for the implementation of this curriculum.

1. Educational objectives and student safety should dictate the nature of the space and facilities to be provided.
2. Facility accessibility must accommodate the diverse and varying special needs of all students.
3. If every teaching station cannot be totally equipped, accessibility to specialized support facilities and services should be provided.
4. Physical arrangements should facilitate cooperative planning among appropriate staff members.
5. Mobile, multipurpose equipment and furnishings should be selected to allow flexibility in planning and instruction.
6. Accessible and convenient storage space for equipment, supplies, and student projects should be provided since it contributes to effective and efficient use of space.
7. Space and facilities should be considered within the context of the total educational program. They can be supplemented through the use of community resources.
8. Sufficient accommodations for recycling and disposal of waste materials must be used.
9. Adequate ventilation and exhaust fans are needed for safety in laboratory areas.

Location

In determining the placement of the Family and Consumer Sciences facility within the school building, it is important to consider the relationship of this program to other programs, accessibility by persons involved in the program, proximity to service facilities such as lavatory and locker areas, and the ways in which the equipment and storage must be shared. For convenience in the delivery of supplies and the installation of equipment, an easily accessible street level floor location, ramps and elevator are recommended, if a first floor location is not possible. Ease of access for special groups, such as young children, older adults, and disabled people, is desirable for optimum use of the facility.

Space Allocation for All-Purpose Room

A minimum of 1200 square feet is recommended in each all-purpose Family and Consumer Sciences classroom. This space should accommodate a recommended maximum class size of 24 students (50 square feet per student). These measurements do not include storage space. If one centralized storage area is to contain laundry equipment, instructional media equipment, supplies, and portable equipment of various kinds, an additional area of up to 200 square feet would be considered practical.

Space Allocations for Specialization Courses (Square Feet)

Cluster	Classroom Area (sq. ft.)	Laboratory Area (sq. ft.)	Adjacent Area (sq. ft.)
Human Services and Family Studies (recommended maximum 24 students)	770	1000 plus 4000 outdoor*	300
Food and Nutrition (recommended maximum 24 students)	770	1200	300
Textiles and Design: Apparel (recommended maximum 24 students)	770	1200	300
Textiles and Design: Housing and Environment (recommended maximum 24 students)	770	1200	300

*Early Childhood Education outdoor laboratory facilities.

Floors

Safety and sanitation, as well as aesthetics and economics, should be important factors in the selection of flooring. Carpeting is not recommended due to high maintenance and sanitation. Therefore, it should be restricted to areas where it is necessary for a specific activity, such as in a play area for young children in the nursery school.

A good commercial grade of sheet vinyl is the preferred flooring in the foods laboratory, while vinyl tile or hardwood would be satisfactory flooring for other areas. Installations for commercial food programs may require a quarry tile floor, baseboards, and a floor drain, especially in the dishwashing and sanitation area.

Walls

Wall surfaces should be as clear of obstructions as possible. Walls provide backgrounds for charts, posters, projection screens, displays, etc. Wall finishes should be washable. Schools must strictly adhere to fire codes.

To subdivide space, movable screens or area dividers are less expensive and more flexible than permanent walls. A standard four-feet-wide panel covered with vinyl or fabric, or having a tack surface or sliding chalkboard/tack surface, is a versatile option that creates usable wall space as well as serving to partition off areas for small group or individual study.

Work Surfaces

Horizontal work surfaces require a smooth, acid resistant plastic laminate or similar material.

There are two considerations when selecting the appropriate height for counters and work tables. The 36-inch height is the standard on the market and is in common use in homes and in the workplace. As the standard, this size of table and cabinet is priced more economically. A lower work height for young teens in the Home and Career Skills program would be very suitable. A 34-inch height is maximum for ADA accessible workstations. Furthermore, portable equipment, such as personal computers, sewing machines, individual viewing carrels, cash registers, etc., may be used more comfortably at heights lower than 36 inches. It is recommended that a multipurpose room include work surfaces of both the 36-inch height counter and work table and the 34-inch height counter and work table to make the room accessible.

Ceilings

Minimum ceiling height in schools is required to be nine feet. In areas being designed for specialized activities, ceiling materials should have sound absorption and light reflective properties. A washable surface is required in food preparation areas.

Windows

Window treatments should allow for the control of natural light and ventilation and are required to be fire resistant. Opaque, darkening shades should be available in rooms where audiovisual equipment will be used. If draperies or blinds are to be used, aesthetics and safety should be considered along with ease and cost of maintenance. Energy conservation features should also be a factor.

Utility Systems

Coordination of basic systems such as heating, ventilation, windows, exhaust fans, air conditioning, and lighting is essential at the design stage. Architects and engineers should ensure maximum efficiency, convenience, and safety as well as compliance with the applicable codes.

In planning heating, ventilation, and air conditioning, year round use as well as seasonal use must be considered. Clearance for vents from the heating and cooling system must be maintained at all times. Equipment and other large objects should not block the passage of air. Special attention must be given to areas in which an excess of heat, fumes, and/or moisture is produced and exhaust fans are used. This would also include the range area. These areas will need auxiliary ventilation.

The electrical design engineer is responsible for meeting local, state, and federal codes on all electrical systems, such as communications, smoke and fire detectors, and security, as well as systems for light and power. Input from teachers and other users on matters of effective lighting and the convenient placement of outlets, etc., is essential in the design and planning phase.

The quality and quantity of natural and artificial light must be adequate for specialized work areas as well as for general illumination. Consider a mix of color and quality of fluorescent, incandescent, and natural sources for adequate nonglare, shadowless light. Classrooms with unusually high ceilings and tall windows will have more natural light and will need less artificial light than will rooms with the nine-foot standard ceiling and smaller windows. Lighting requirements should be considered in the planning of location, spacing, and switching of the room lighting system. Special lighting for displays and dimming capabilities for audiovisual areas are also significant factors to include in planning.

Safety and convenience must both be served in providing power for areas where there will be high equipment use. Consider all small and large appliance amp/volt ratings to dictate the spacing, location, and number of outlets per circuit. The high power requirements of electric ranges and dryers (usually 220 volts) need to be planned for and located even more carefully. Standards and codes dictate placement of outlets to some extent; however, placement of equipment and heavy furniture should also be considered. Easy access to outlets is essential. If at all possible, avoid placing outlets in the floor. Ground Fault Interrupters should be used in all 15- and 20-ampere outlet branch circuits. A system of emergency electric shutdown should be in place.

All of the Family and Consumer Sciences programs require a water supply of sufficient volume, temperature, and pressure to operate kitchen and laundry equipment. There must be enough hot water to last through the day and meet sanitation and safety requirements.

Storage

Adequate space and functional design of storage should be one of the most carefully considered aspects of the facilities plan. Convenient and well-planned storage serves as an example to students who are learning good management.

The location of general storage units is an early planning decision that must be made. General storage may be accomplished in a separate storeroom or within each classroom laboratory, or both. The advantages of a separate room are (1) greater security and (2) release of classroom space for other purposes. The advantage of in-room storage is ease of access. A general storage area should include the following features:

- open, adjustable shelves for books and print resources;
- locked storage for supplies, records, tests, and teachers' personal belongings;
- closed cabinets with adjustable shelves for teaching resources;
- closed storage with space for hanging garments;
- standard four-drawer filing cabinet;
- double-door cabinets with horizontal spaces to hold tote trays for student projects and limited access supplies and equipment;
- flat or bin-type storage for posters, craft paper, patterns, etc.;
- pegboard for organized storage of small tools and equipment;
- wall cabinets over counters where suitable;
- portable mobile equipment for flexible and multi-use facilities;
- storage cabinets which can be locked and moved as needed; and
- a dedicated storage area for supplies needed for Family, Career and Community Leaders of America (FCCLA) to include resource materials and supplies.

Part III

CLASSROOM FURNITURE AND EQUIPMENT

The type of equipment found in homes and businesses in the community provides a useful standard for selection of furnishings for the school facility. In addition, classroom equipment must demonstrate a reasonable range of current technological possibility. The quality should be good enough to ensure ease of operation and maintenance and the ability to withstand the wear and tear of heavy use.

- There should be harmony in the total plan, but a variety of styles, models, materials, finishes, and features should be used to illustrate alternative choices.
- The keys to good selection are versatility, simplicity, and functional design.
- Ease and cost of upkeep, including renovation and repair, should be considered in addition to the original cost.
- Traffic flow and activity patterns should be considered in the placement of permanent fixtures and in the location of storage.
- Permanent heavy equipment and cabinets should be arranged against a wall, with a minimum of fixed installations projecting into the classroom.
- Portable furniture and equipment should be both lightweight and durable.

<u>The Instructional Area</u>

The instructional area or classroom is made up of four work centers: the presentation/demonstration center, the instructional media center, the teacher work center, and the laboratory facilities and equipment.

The presentation/demonstration center should be convertible for large or small group activities. This area should be furnished with heavy duty, multipurpose tables with laminated tops, hard edges, and straight legs. Chairs should provide the correct seating height for the tables and encourage good working posture. Chairs with tablet arms are not appropriate for this area if space is limited.

- Storage units and shelves should be provided in this space if they are not planned for in an auxiliary space.
- A continuous counter around the room at a convenient and comfortable height for equipment use is an option that may work for some programs.

The instructional media center provides for demonstrations in preparation for laboratory experience, as well as for audiovisual presentations. The area should be equipped for display and projection. Adequate provisions for audio and/or visually enhanced instruction include:

- eight to ten linear feet of wall-mounted tackboard;
- eight to ten feet of chalk board and/or whiteboard;
- permanently installed projection screen that rolls up when not in use; and
- capability for the use of a full range of current teaching/learning technologies, and new instructional technology as it becomes available.

A teacher work center should be provided for each teacher on the staff. The furniture and equipment should include a desk with locking drawers, four-drawer file cabinet, bookshelf unit, desk chair, conference chair, and standard office supplies. If the instructional area is shared by two or more teachers, the teacher work center could be provided in each of the laboratory areas as described in part IV.

The laboratory facilities and equipment are described in detail in Part IV of this document.

Part IV

LABORATORY FACILITIES AND EQUIPMENT

All middle school and high school Family and Consumer Sciences facilities should include the following:

The computer center should have the capability for a full range of current state of the art teaching/learning technologies, and new instructional technology as it becomes available. This center should be located adjacent to the presentation center and would be used for such diverse projects as money management, human development, nutrition management, and career exploration. Secure storage of equipment and software is essential.

A career resource center containing books, periodicals, job application forms, etc., should be in an area that helps to keep a career focus visible. The bulk of career reference materials may be located elsewhere in the school.

Laboratory areas should be equipped with standard appliances. Students will use these areas in a variety of hands-on activities related to personal and family resource management. The following general recommendations describe equipment and furnishings of these areas. Because there is a wide variety of small appliances and equipment available, teachers should be consulted in making final equipment choices. Sturdy, durable, and state-of-the-art equipment is essential; however, the primary criterion for selection should be safety in using the equipment in laboratory settings.

Home and Career Skills (Grades 5,6,7,8)

The work-center approach is useful in designing spaces that encourage the 75 percent hands-on methodology recommended for this program. The presentation center, the instructional media center, the teacher work center, and the storage center described in previous sections are essential starting points. In addition, the Home and Career Skills classroom should include:

- **Food and Nutrition: Laboratory Facility**

  This facility should be equipped with a range (or surface burners and built-in oven), microwave oven, sink and garbage disposal unit, dishwasher, and refrigerator/freezer. A portable service cart and a demonstration center with observation capability are also recommended. A selection of state-of-the-art small portable appliances will extend the use of resources and can be stored out of sight when not in use. A minimum number of kitchen units to accommodate a recommended ratio of 3-5 students per kitchen unit to ensure student safety. At a minimum, each unit should contain a sink, counter space, and range.

- **Housing & Environment: Laboratory Facility**

  This facility should be furnished with tables that can serve as working surfaces for the study of housing and interior design, furnishings, as well as the design and management of personal living space. Simulations, models, instructional media, technology, and community resources can be used to augment instruction. A range of housing, environment, and interior design tools and supplies, as well as art and design materials, should be available.

- **Human Services and Family Studies: Laboratory Facility**

  This facility should be furnished with tables and chairs that will be used for the study of Human Services and Family Studies. The focus is on human development, interpersonal skills and relationship skills across the life span. Students will learn by using the literature in the field, case studies, observations, instructional media, speakers, and the community. They will explore contemporary issues, examine the family, and analyze the role of the adolescent in their continually changing personal world including family, community, and work environments. This topic requires open space, multipurpose furniture for the personal interaction across the life span, and state-of-the-art instructional media and technology capabilities. There should be access to food preparation facilities and human observation across the life span. Additional resources might include a range of age appropriate books and interactive toys and manipulative materials, objects, and equipment.

- **Textiles, Design, and Apparel: Laboratory Facility**

  This facility should be furnished with tables that can serve as working surfaces with portable sewing machines, sergers, and/or specific cabinetry designed for sewing machines. In addition, a selection of state-of-the-art equipment, supplies and materials for apparel and textile-related projects should be considered. Other resources such as mannequins, pressing equipment, and a triple mirror are desirable. Additional resources recommended for apparel construction, design, and performance evaluation should be provided and stored nearby. The laundry facilities should be accessible from this area.

Family and Consumer Sciences Clusters (Grades 9-12)

- **Food and Nutrition Laboratory**

  This facility will be used by students enrolled in the Food and Nutrition Core, the specialized courses in the Food and Nutrition Cluster and may be used by other Family and Consumer Sciences specialized courses. The application of nutrition concepts to meal management, including planning, purchasing, preparing, and serving food, will be studied. Related career competencies are identified and developed.

  Four types of work centers support the content of this cluster: food preparation and service center, commercial food preparation and service center, dishwashing and sanitation center, and storage center.

The following materials, equipment, and access are recommended:

1. An adequately equipped instructional area is essential. Ideally, it is part of the laboratory space and includes a management center where planning, organizing, and accounting are done. A desk and chair, file cabinet, telephone, and computer are necessary furnishings.
2. Easy access to laundry facilities and storage is necessary.
3. A fire blanket, fire extinguishers of appropriate type(s), and a first-aid kit must be housed in each laboratory.
4. An appropriate array of equipment, tools, and accessories should be available to furnish these work centers. Facility planners should seek out the recommendations of teachers who will be implementing the curriculum, so that appropriate choices can be made.
5. It is advisable to select representative brands and models of equipment, so that students can compare and evaluate various features.

- **Human Services and Family Studies Laboratory**

This facility will be used by students enrolled in the Human Development Core, the specialized courses in the Human Services and Family Studies cluster, and may be used by other Family and Consumer Sciences specialized courses.

Much of the content of the Human Services and Family Studies courses does not require fixed laboratory equipment. The focus is on human development and relationship skills. Students will learn by using the literature in the field, case studies, observations, instructional media, speakers, and the community. They will explore contemporary issues, examine the family, and analyze the role of the adolescent in their continually changing personal world, including family, community, and work environments. They will practice interpersonal skills such as how to relate to one another, children, and adults across the life span. These courses require open space, multi-purpose furniture, and state-of-the-art instructional media, and technology capabilities.

A laboratory or community setting is critical to learning experiences for content, focusing on human development and relationship skills across the life span. Opportunities for students to work with young children or individuals across the life span for significant blocks of time, on site, in a child care laboratory or in a nearby community facility, lead to career competencies related to Human Services and Family Studies.

The following recommendations apply to school settings where high school students will gain experience with infants and young children in an early childhood environment.

1. The laboratory space should be arranged and equipped with attention to the needs of the student learners and the needs of the young children who will participate.
2. Work centers can be created by moving equipment and furniture around in various groupings. For example, a creative play center can become a snack center by simply clearing and rearranging tables. Spaces can be determined by function.

3. The instructional classroom area should be adjacent to the play area.
4. The laundry/storage area and food preparation area must be convenient to the play area.
5. Bathroom facilities for young children must be accessible.
6. Alternative environments for working with children of varying ages may be located in elementary schools, private and public early childhood centers, or other community settings.
7. The following guidelines describe the furnishings and equipment of a typical early childhood program.

- A carpeted area is desirable for "circle time" or quiet play and is strongly recommended. Wood or vinyl flooring are satisfactory options.

- Lightweight, movable, child-sized tables constructed of materials easily maintained and sanitized and sturdy chairs are necessary. Numbers depend upon program size.

- Several types of storage will be needed:

  - Low, open shelves for toys;
  - Standard closed cabinets for supplies; and
  - lockers or cubbies for children's coats.

- Furniture for the teacher and the high school students include:

  - desk and adult chairs;
  - filing cabinet and book case;
  - various tools for occasional repairs; and
  - first-aid kit, including universal/standard precautions.

- Access to state-of-the-art technology and instructional media capabilities are necessary.

Textiles, Design: Apparel Laboratory

This facility will be used by students enrolled in the Clothing and Textiles Core, the specialized courses in Textiles and Design: Apparel Cluster, and may be used by other Family and Consumer Sciences specialized courses. The content of these courses relates clothing to its construction, design, cultural, historical, social, psychological, physical, economic, and aesthetic contexts. These courses provide the opportunity to gain basic textile knowledge and to develop clothing construction and care skills as related career competencies are identified and developed.

State of the art sewing machines, sergers, and equipment for the individual consumer use in clothing construction are suitable for these courses. Commercial equipment may be desirable if commercial clothing production is presented. Access to equipment used in retail merchandising is also recommended.

Three work centers compose this laboratory:

- The instructional center may be incorporated into the laboratory or be in an adjacent area, possibly shared with other instructors.

- The laundry/storage center must accessible from this laboratory. In addition to the equipment already listed, the following items are recommended:

    - triple, full-length fitting mirror;
    - color draping set;
    - fitting stand and screen;
    - vacuum cleaner;
    - ironing board and pressing equipment; and
    - large flat table space.

- The construction center should include multipurpose sturdy tables, chairs, and sewing machines. A variety of types of machines may be selected.

Textiles and Design: Housing and Environment Laboratory

This facility will be used by students enrolled in the Housing and Environment Core, the specialized courses in Textiles and Design: Housing and Environments Cluster, and may be used by other Family and Consumer Sciences specialized courses.

These courses emphasize an understanding of housing needs, architectural design, home furnishings and accessories, furniture construction, and the care and repair of furniture. Related career competencies are identified and developed. In addition to classroom state of the art instructional media equipment and laboratory areas established for the apparel laboratory, the following equipment and materials are recommended:

- computer and state of the art software for design;
- flat storage for craft, graph, and construction paper;
- closed cabinet storage for drawing and other art and design supplies;
- locked cabinet storage for furniture refinishing supplies;
- shelves for charts, trade journals, samples, and models;
- bulletin boards, flannel boards, display case, and display board; and
- adequate flat table space.

Conclusion

The environment created by physical facilities is a significant factor in learning. This document is designed to assist chief school administrators, school business administrators, building level administrators, Family and Consumer Sciences teachers, advisory committees, and architects in planning and selecting space and equipment best suited to Family and Consumer Sciences

Department needs. For further information, contact the New York State Education Department's Office of Curriculum and Instructional Support CTE team at 518-486-1547.