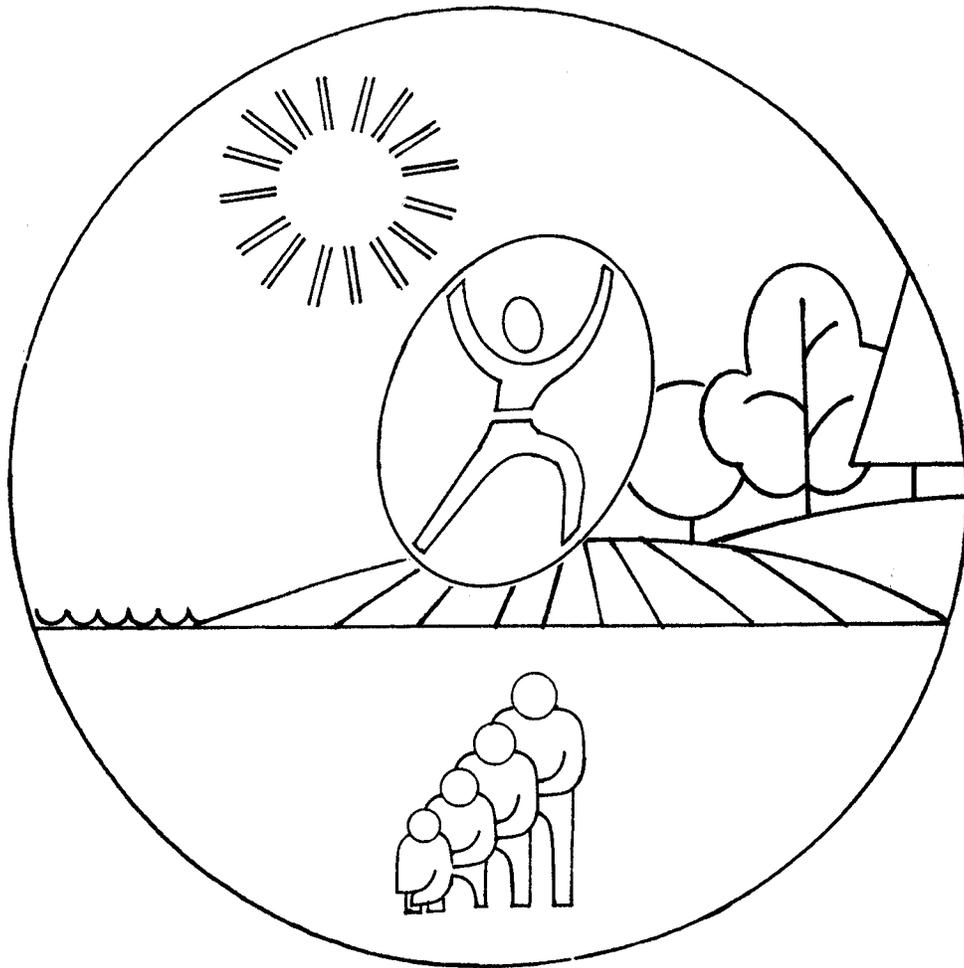


HEALTH OCCUPATIONS EDUCATION EQUIPMENT AND FACILITIES GUIDE



FOREWORD

As a result of the social, demographic, ecological, and economic changes occurring in New York State, and the new requirements of the Commissioner's Regulations, Occupational Education must substantially revise curricula and instructional programs. These changes have caused significant impact on the equipment and facilities needed to implement the new directions. The Board of Regents and the State Education Department are reshaping the secondary occupational education system to provide students with the skills needed in the changing world of work. The basic goals of occupational education have been revised and expanded to stress broad, transferable skills that focus on problem solving and decision making, while maintaining traditional elements of hands-on learning, connections with business and industry, and preparation for employment. Successful occupational education programs depend on equipment related to that which is used in business and industry to a greater degree than do most academic programs. This presents two distinct challenges to occupational programs in regard to upgrading equipment used for instruction:

1. Equipment is needed that can help to teach a series of broad transferable skills required to both obtain and maintain employment in diverse occupations.
2. Equipment representative of the new and emerging technologies must replace out-of-date inventory for both traditional and future employment and career development opportunities.

The following pages present recommendations concerning the type of equipment and facilities that will support instruction in Health Occupations Education programs.

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INTRODUCTION

Administrators, supervisors, and teachers using this guide for program planning and development must consider the new technologies, which may require some adjustment of the materials and equipment listed, in order to meet the diverse needs of the students as they prepare for the requirements of future careers.

Care must be given to accommodate special needs students. Program planners should refer to the appropriate Federal and State guidelines on education of special needs populations. The technology of today does offer alternative methods of data input, especially in the computer field, and some provisions for equipment for handicapped students are contained in this guide. Touch sensitive screens, voice sensitive input devices, and braille keyboards are some of the devices currently available for special needs students.

Upon acquiring new equipment and facilities, program planners should review and incorporate installation and program operation procedures so as to meet all requirements and regulations relating to the safe use of equipment and facilities by students and staff. Sources such as the Federal "Occupational Safety and Health Act," the "New York State Safety and Health Act," local fire codes, and room occupancy limits should be consulted for detailed information.

In that budgetary and enrollment considerations are always important in education programs, the following are recommended minimum levels of basic equipment needed in the modern Health Occupations Education classroom and laboratory setting:

1. Required classroom and laboratory areas for various health occupations education programs should be adjacent to each other in a facility, which allows for common locker space, sharing of equipment and resources, and more effective utilization of facilities.
2. All health occupations education programs require a convenient supply of hot and cold water for handwashing and other procedures.
3. Audiovisual and computer resources that are used for common modules and current technical procedures can be shared through a centrally located resource center.
4. Required Core curriculum may be taught outside of the specialized program area. Classroom space, a centrally located resource center, and specialized equipment would be necessary.

The following pages present recommendations concerning the type of equipment and facilities that will support instructions in Health Occupations Education Programs. The tables are organized into Core requirements and five program clusters areas: Nursing Care/Rehabilitation, Dental Assisting, Medical Assisting, Dental Laboratory Technician, and Medical laboratory Assisting. The headings indicate the type of facility (i.e., classroom, laboratory, office, operator, examination room, x-ray), any special facility consideration (i.e., water supply, electrical outlets, storage), safety access considerations for students and teachers, and the equipment needed to provide for appropriate student experiences.

HOE CORE

FACILITY TYPE: Classroom

FACILITY CONSIDERATIONS:

- Hot and cold running water
- Multiple 110-volt electrical outlets
- Equipment and supply area with secured storage

SAFETY AND ACCESS CONSIDERATIONS:

- Amplification for stethoscopes

EQUIPMENT NEEDED:

Mercury thermometers (oral), Stethoscopes, Sphygmomanometers, Anatomical and teaching manikins (baby, child, adult, trauma, choking), Resusci-dolls with monitoring (baby, child, adult), Splints and backboards, Bandages and slings, Kinesiology skeleton with cabinet, Anatomical models of body parts and organs

Telephone simulator, Microcomputer with printer and wordprocessor software, Carrels with individual projectors and earphones, Audiovisual resources, Computer software resources

Equipment must be modified for students with handicapping conditions

NURSING CARE/REHABILITATION

FACILITY TYPE: Classroom and laboratory

FACILITY CONSIDERATIONS:

- Hot and cold running water
- Multiple 110-volt and 220-volt electrical outlets
- Equipment and supply area with secured storage
- Shades or blinds for privacy
- Panels for noise control
- Media and resource center with storage

SAFETY AND ACCESS CONSIDERATIONS:

- Amplification for stethoscopes

Bed Unit: Bed, Mattress, Side rails, IV pole, Overhead table, Bedside cabinet, Triple panel screens, Examination table with stirrups, Cabinet

Wheelchair, Stretcher, Commode, Walker, Canes, Hoyer lift, Scales (upright portable), Mercury thermometers (rectal and oral), Electronic thermometer, Stethoscopes, Sphygmomanometers, Audiometer, Suction machine, Visual acuity testing machine, Ophthalmoscope, Otoscope, Microscope (oil immersion), Splints and backboards, Restraints, Infusion trainer, Portable IV pole, IV monitoring controller, EKG machine, Glucometer, Hemoglobinometer, Urinometer

Anatomical teaching manikins (baby, child, adult, CBS, trauma, choking), Resuscidolls with monitoring (baby, child, adult), Kinesiology skeleton with cabinet, Anatomical models of body parts and organs

Sterilizers, Storage cabinets, Medicine cabinets, Treatment cart, Washer and dryer, Dishwasher, Refrigerator, Stove, sink, Utility cart, Laundry cart

Telephone simulator, microcomputer with printer and wordprocessor software, Nurse's desk and chair, Doctor's desk and chair, Chart rack/carrier, Carrels with individual projectors and earphones, Audiovisual resources, Computer software resources

Equipment must be modified for students with handicapping conditions

DENTAL ASSISTING--ADMINISTRATIVE AND CLINICAL

FACILITY TYPE: Classroom and laboratory

FACILITY CONSIDERATIONS:

- Visible work station
- Secured and temperature controlled storage areas and cabinets
- Master cut-off valve for gas and/or electricity
- Multiple 110-volt and 220-volt electrical outlets
- Hot and cold running water sinks with stone traps and chemical resistance
- Nonporous and chemical/heat resistant bench tops and flooring
- Individual station lighting
- Media and resource center with storage

SAFETY AND ACCESS CONSIDERATIONS:

- Work flow-safe, sequential, and orderly
- Eye wash station, goggles, safety gloves (heat, chemical, and fire resistant)
- Rubberized floor mats

EQUIPMENT NEEDED:

Laboratory cabinets, Benches, Chairs, Articulators, Gram weight scale, Glass measuring graduates, Laboratory bench handpiece with foot rheostat, Lathe, Chucks with accessories, Splash hood with shield, Dust collector, Model trimmer with shield, Vibrator (platform type), Vibrator (standard), Vacuum forming machine, Assorted resin materials, Plaster and stone bin, Safety glasses, Fire extinguisher, Laboratory bench lights, Plaster trap, Lab work pans, Bunsen burners, model formers, Plaster knives, Plaster spatulas, Alginate spatulas, Water bath, Assorted waxes, Wax carver/spatulas double ended, Boley gauge, Model plaster, Denstone, Paper towels with dispenser, Rubber mixing bowls (assorted), Acrylic tray (power and liquid), Sable hair brushes (assorted), Assorted laboratory burs, miscellaneous abrasive and polishing materials (mandrels, discs, stones), Glass bead sterilizer, Assorted rubber dam instruments, Rubber dam material and accessories, Endodontic organizer, Endodontic gauges, Assorted broaches, Files and reamers, Irrigating syringes, Pluggers and spreaders, Assorted gutta percha points, Paper points, RCT cements

Telephone simulator, Microcomputer with printer and wordprocessor software, Nurse's desk and chair, Doctor's desk and chair, Chart rack/carrier, Carrels with individual projectors and earphones, Audiovisual resources, Computer software resources

Equipment must be modified for students with handicapping conditions

DENTAL ASSISTING--ADMINISTRATIVE AND CLINICAL, continued

FACILITY TYPE: Office and reception

FACILITY CONSIDERATIONS:

- Should be adjacent to classroom and laboratory area

SAFETY AND ACCESS CONSIDERATIONS:

- Work flow-safe, sequential, and orderly

EQUIPMENT NEEDED:

Word processor, Adding machine, File cabinets, office desk, Waiting room chairs, Desk chair, Office signs, Telephone system, Circular file for telephone numbers, Copy machine, Dictating machine, Tape recorder

Equipment must be modified for students with handicapping conditions

FACILITY TYPE: Operatory

FACILITY CONSIDERATIONS:

- Should be adjacent to classroom and laboratory area
- Visible work station
- Master cut-off valve for gas and/or electricity
- Multiple 110-volt and 220-volt electrical outlets
- Hot and cold running water

SAFETY AND ACCESS CONSIDERATIONS:

- Work flow-safe, sequential, and orderly
- Eye wash station, goggles, safety gloves (heat, chemical, and fire resistant)
- Rubberized floor mats

DENTAL ASSISTING--ADMINISTRATIVE AND CLINICAL, continued**Operatory, continued****EQUIPMENT NEEDED:**

Dental chair, Dental units, Dental lights, Operatory cabinets with sink, Doctors' stools, Assistants' stools, Mobile cabinets, Air compressor, Vacuum system, Autoclave, Dry heat sterilize, Ultrasonic cleaner and accessories, Waste receptacles, Amalgamator, Emergency oxygen unit, Office emergency kit, First aid kits, Handpick (high speed), Handpick (straight air drive), Contra angles, Trophy angles, Hydrocolloid conditioner, Assorted hydrocolloid accessories and materials, Portable pulp tester, Ultrasonic prophylaxis unit, Baumanometer, Stethoscopes, Anesthetic syringes, Assorted needles, Cartridges and miscellaneous anesthetic supplies, Assorted burs and diamond stones with accessories, Amalgam carriers, Carvers, Condensers, Burnishers, Assorted amalgam accessories (wells, wedges), matrix retainers, Matrix bands, Light curing unit, Complete composite kit (light cured), Composite instruments, Composite accessories, Amalgam alloy capsules, powder, mercury and dispensers, Assorted cements, Mixing pads, Glass slabs, Absorbent tissues, Tray covers, Paper cups, Headrest covers, Cotton applicators, Client aprons and towel clips, Utility gloves, Face masks, Latex exam gloves

Equipment must be modified for students with handicapping conditions

FACILITY TYPE: X-ray

FACILITY CONSIDERATIONS:

- Should be adjacent to classroom and laboratory area
- All equipment should be installed in compliance with State Public Health Law.

SAFETY AND ACCESS CONSIDERATIONS:

- Work down-safe, sequential, and orderly
- Lead shielding

EQUIPMENT NEEDED:

Intra oral X-ray unit, X-ray chair, Dexter head and torso, Desk top X-ray viewer, Darkroom safelight and illuminator, Darkroom accessories, Timer, Film hangers, Thermostatic controls, Film duplicator, Manual processing tank, Automatic processing unit with daylight loader, Lead-lined client apron with collar, Leadlined film dispenser and receptacle, Intensifying screen and cassette, X-ray film and accessories

Equipment must be modified for students with handicapping conditions

MEDICAL ASSISTING--ADMINISTRATIVE AND CLINICAL, continued

FACILITY TYPE: Classroom and Laboratory

FACILITY CONSIDERATIONS:

- Hot and cold running water
- Multiple 110-volt and 220-volt electrical outlets
- Equipment and supply area with secured storage
- Shades or blinds for privacy
- Media and resource center with storage

SAFETY AND ACCESS CONSIDERATIONS:

- Amplification for stethoscopes

EQUIPMENT NEEDED:

Fume hood and exhaust, Laboratory bench with appropriate fixtures

Bunsen burner, Blood glucose monitor machine, Calorimeter, Centrifuge (large test tube), Flasks and beakers, Hemocrit centrifuge and reader, Hemocytometer, Hemoglobimeter, Hemalet, Microhematocrit, centrifuge and reader, Portable electrocardiograph machine, Microscope with oil immersion lens, Sedimentation tubes, Staining rack and tray, Urinometer, Fire extinguisher

Human study models

Autoclave, Hotplate, Incubator (bacteriology), Laboratory timer or clock, Laboratory table with storage drawers, Refrigerator, storage furniture, Utility cart

Microcomputer with printer and wordprocessor software, Carrels with individual projectors and earphones, Audiovisual resources, Computer software resources

Chair for blood drawing

Equipment must be modified for students with handicapping conditions

MEDICAL ASSISTING--ADMINISTRATIVE AND CLINICAL, continued**FACILITY TYPE:** Office and reception areas**FACILITY CONSIDERATIONS:**

- Should be adjacent to classroom and laboratory area

SAFETY AND ACCESS CONSIDERATIONS:

- Work flow-safe, sequential, and orderly

EQUIPMENT NEEDED:

Adding machine, Circular file for telephone numbers, Copy machine, Secretarial desk, Dictating machine, Wordprocessor, File cabinets, Tape recorder, Telephone system, End table, Lamp, Chairs or sofa

Equipment must be modified for students with handicapping conditions

FACILITY TYPE: Examination area**FACILITY CONSIDERATIONS:**

- Should be adjacent to classroom and laboratory area
- Hot and cold running water
- Multiple 110-volt and 220-volt electrical outlets

SAFETY AND ACCESS CONSIDERATIONS:

- Amplification for stethoscopes

EQUIPMENT NEEDED:

Examination table, Gooseneck lamp, Instrument and dressing jars, Instrument and dressing trays, Lifting forceps and containers, Linen hamper, Medication cabinet, Moist and dry heat sterilizers, Otoscope-Ophthalmoscope set, Scales (infant and adult balanced), Examination instruments, Snellen chart, Sphygmomanometers, Stethoscopes, Electronic thermometers, Mercury thermometers, Waste receptacle, Magnifying light, Cautery machine, Utility cart

Equipment must be modified for students with handicapping conditions

DENTAL LABORATORY TECHNICIAN

FACILITY TYPE: Classroom and laboratory

FACILITY CONSIDERATIONS:

- Secured and temperature controlled storage areas and cabinets
- Master shut-off valve and switches for gas and/or electricity
- Multiple 110-volt and 220-volt electrical outlets
- Hot and cold running water sinks with chemical resistant stone traps
- Nonporous and chemical/heat resistant bench tops and flooring
- Individual station lighting
- Visible work stations
- Media and resource center with storage

SAFETY AND ACCESS CONSIDERATIONS:

- Work flow-safe, sequential, and orderly
- Goggles, safety gloves (heat, chemical, and fire resistant)
- Shower
- Rubberized floor mats

EQUIPMENT NEEDED:

Demo benches with air, gas, and electric outlets, Storage space

Casting benches, Plaster benches, Processing and polishing benches

Porcelain area for oven, Inlay furnace, Lamps with adjustable arms, Electronic microscope, Vacuum pump, Glazer vacuum furnace, Porcelain vacuum furnace

Model trimmers, Casting machines, Lathes, Water bath, Bunsen burners

Vacuum mixers, Vacuum spats, Air compressor, Vibrators, Torches, Assorted burs, Abrasive and polishing materials, Handpiece with foot control, Auto chucks, Grinders, Ultrasonic cleaner, Restoration/articulation system, Curing units, Flask press, Vacuum forming machine, Laboratory saw frame with saw, Utility cart, Stone and plastic bin, Sand blaster

Carrels with individual projectors and earphones, Microcomputer with printer and wordprocessor software, Computer software resources, Audiovisual resources

Equipment must be modified for students with handicapping conditions

MEDICAL LABORATORY ASSISTING

FACILITY TYPE: Classroom and laboratory

FACILITY CONSIDERATIONS:

- Secured and temperature controlled storage areas and cabinets
- Master shut-off valve and switches for gas and/or electricity
- Multiple 110-volt and 220-volt electrical outlets
- Hot and cold running water sinks with chemical resistant stone traps
- Nonporous and chemical/heat resistant bench tops and flooring
- Individual station lighting
- Visible work stations
- Media and resource center with storage

SAFETY AND ACCESS CONSIDERATIONS:

- Work flow-safe, sequential, and orderly
- Goggles, safety gloves (heat, chemical, and fire resistant)
- Shower
- Rubberized floor mats

EQUIPMENT NEEDED:

Explosion proof cabinet, Fume hood exhaust, Laboratory benches, Tripod stand, ESR rack, Staining rack, CPR stand

EKG machine, Automated equipment, Autoclave for pro-time, Centrifuge, Incubator, Microscopes (oil immersion), PH meter, Analytical balance, Coulter counter, Flame photometer, Microhematocrit centrifuge, Automatic pipet washer, Spectrophotometer, Torsion balance, Triple beam balance, Bunsen burner, Refractometer, Microurinometer, Hematocrit reader, Laboratory timer, Chloride titrator, Technician autoanalyzer, Fire extinguisher

Tally counter, Assorted pipets, Westergren rack, Slide viewing box, Ceramic ring slide, Metric ruler, Slide rotator, Magnetic stirres, Inoculating loops and needles

Refrigerator (explosion proof), Hot air oven, Hot plate

Microcomputer with printer and wordprocessor software, Carrels with individual projectors and earphones, Audiovisual resources, Computer software resources

Equipment must be modified for students with handicapping conditions