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ABSTRACT

This instructional task listing is designed to be used in combination with the "Health Occupations Education Service Area Resource" in order to implement competency-based education in the respiratory therapy assistant program in Virginia. The task listing contains three major sections: (1) duty areas; (2) a program description; and (3) a content outline. Each duty area contains related validated tasks. In addition, enabling objectives are identified for each task. The purpose and a general description of the course are included in the program description. The content outline provides a guide illustrating areas to be covered in the course, including the use of equipment, infection control standards, and clerical and communications assistance. (KC)

APPLICATION OF TASK LISTING

The task listing has been produced for use in developing and selecting instructional materials and implementing competency-based education for the following program and course:

PROGRAM	COURSE
Health Careers Cluster (CIP Code: 17.0819)	Health Assistant II--Respiratory Therapy Assistant (8332)

Additional information concerning the application and use of this publication may be obtained from the following office:

Health Occupations Education Service
Virginia Department of Education
P.O. Box 6Q
Richmond, Virginia 23216
(804) 225-2087

TASK LISTING FOR RESPIRATORY THERAPY ASSISTANT

Developed by

Respiratory Therapy Technical Committee
Health Assistant Project
Virginia Association of Allied Health Professions

and

Health Occupations Education Service
Vocational and Adult Education
Department of Education
Commonwealth of Virginia

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INTRODUCTION AND USE

INTRODUCTION

One of the major characteristics of competency-based education (CBE) is that the course content is based upon actual jobs or tasks performed by the worker. In Virginia, the Department of Education has established standards for competency-based education. According to these standards, competencies must be role-relevant and based upon appropriate research. This standard states:

> Role-relevant competencies are identified and stated.
>
> The competencies, with standards, will be identified through V-TECS, IDECC, and other appropriate research. Advisory committees should be used to review competencies and standards. Competencies in the affective domain will be included. Role-relevant competencies for occupational preparation programs are those that specifically relate to the occupation for which the student is being prepared, as well as to the personal needs of the student. Role-relevant competencies are related also to orientation, exploration, and/or industrial arts experiences which have been identified for students.

Therefore, role-relevant jobs or tasks, called competencies in CBE, must be identified and validated before instructional materials are developed and subsequent instruction takes place.

This task list for Respiratory Therapy Assistant was developed by the Respiratory Therapy Technical Committee, composed of registered respiratory therapists, health care industry educators, and vocational educators. Committee members were Don O'Donohue (Chairman), Hugh Doyle, William Dubbs, Rick Shelly, Ed. D., Jennie Seaton, Ed. D., Carol Hampton, Carol Stickney, and Ned Swartz, Ed. D. The project was managed in contract #VA-83-C-131-2-HO-001 between the Virginia Association of Allied Health Professions (VAAHP) and the Virginia Department of Education, Division of Vocational and Adult Education, Health Occupations Education Service under the provisions of the Vocational Education Amendments of 1976 (Public Law 84-482).

The Committee used the following available sources:

1. The current V-TECS catalog for Respiratory Therapist;
2. The review and selection of appropriate competency-based materials developed by other states and systems and by the national certifying agency for respiratory therapy;
3. Interviews with former students and incumbent workers;
4. Input from practicing respiratory therapists, health care teachers, and curriculum specialists.

The next step was validation of the task list. This involved:

1. Review and validation by the Virginia Society of Respiratory Therapy, Inc. to ensure role-relevance, appropriateness, and completeness. Recognition by this Society is essential both to training and to employment of this worker.
2. Final review and editing by writing team members, project directors, and state staff.

This process was used to determine whether the identified tasks are performed by the respiratory therapy assistants presently employed and whether the tasks are appropriate for this entry-level worker in respiratory therapy.

It is essential that all instruction be based on this validated task list. The tasks are not necessarily arranged in order of difficulty of tasks or instructional sequence, but are grouped by duty areas.

USE

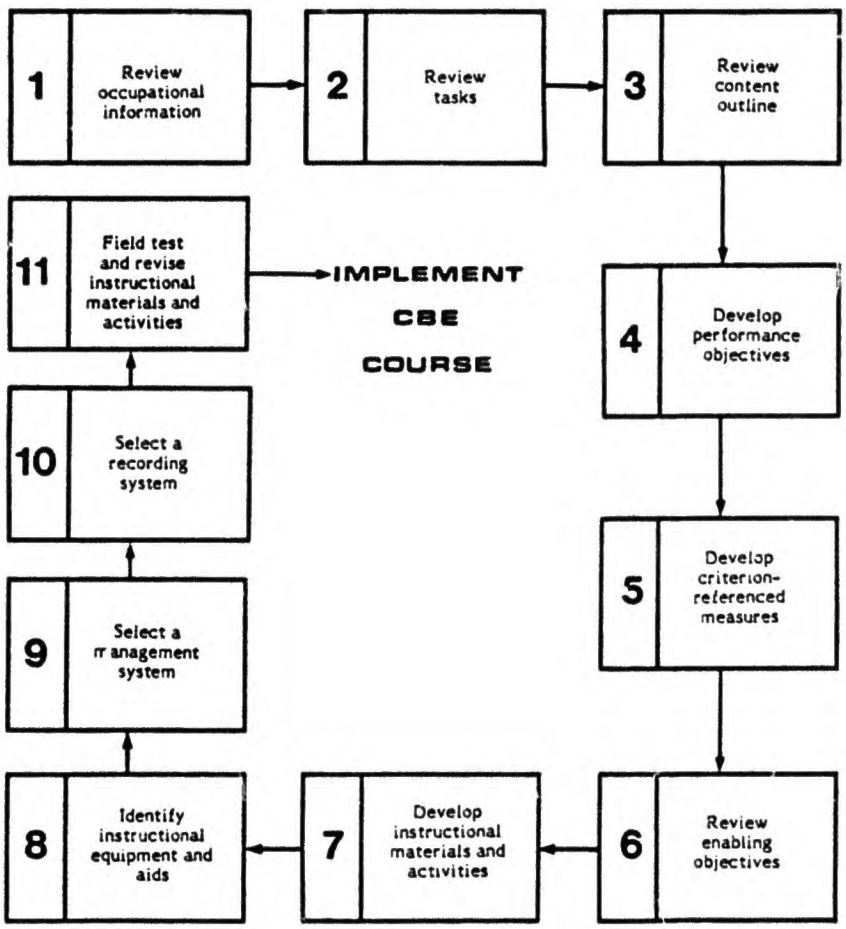
This task listing is designed to be used in conjunction with the Health Occupations Education Service Area Resource guide in order to implement competency-based education in the health occupations program. The Service Area Resource contains information which pertains to all programs within Health Occupations Education. The four sections of the resource are titled: Occupational Information, Student Organizations (HOSA), Classroom Management Systems, and Recording Systems.

This task listing contains three major sections: Duty Areas, a Program Description, and a Content Outline. Each duty area contains related validated tasks. In addition, enabling objectives are identified for each task.

The list should be used in developing a local respiratory therapy assistant track in Health Assistant II (#8332). Performance objectives, criterion referenced tests, and instructional activities should be prepared for each competency. The diagram illustrates the steps to be followed when using the task listing and Service Area Resource guide to implement CBE. Classroom and/or clinical instruction should be provided for each competency.

Where the respiratory therapy assistant is one training option in Health Assistant II, the health assistant teacher will serve as coordinator for the training which may be cooperative for pay or work experience. When in the clinical setting, the student will function under supervision of a respiratory therapy practitioner who will meet regularly with the teacher-coordinator.

CBE in a vocational program or course is illustrated by the following diagram:



DUTY AREAS

DUTY AREA

1. Providing Equipment for Patient Use and Observing Safety Measures
2. Observing Quality Control Measures for Equipment Distribution and Processing
3. Maintaining Infection Control Standards
4. Providing Clerical and Communications Assistance

DUTY AREA: 1. PROVIDING EQUIPMENT FOR PATIENT USE AND OBSERVING SAFETY MEASURES

TASK/COMPETENCY

1.1 Prepare non-life support respiratory therapy equipment for patient use

ENABLING OBJECTIVES

E1.1.1 Explain the importance and relevance of non-life support equipment.

E1.1.2 Identify oxygen administration devices. Include: 1) nasal cannula, 2) single mask, 3) partial rebreathing mask, 4) non-rebreathing mask, 5) face tent, 6) tracheostomy (masks) collars, 7) T-adapters (Briggs-T), 8) air entrainment masks, 9) oxyhoods, 10) croupettes, 11) trach-talks.

E1.1.3 Identify aerosol generators. Include: 1) pneumatic nebulizers, 2) ultrasonic nebulizers.

E1.1.4 Identify humidifiers. Include: 1) bubble-type, 2) cascade/passover-type.

E1.1.5 Identify gas delivery, metering, and analyzing devices. Include: 1) regulators, reducing valves, connectors, flowmeters, 2) air-oxygen blenders, 3) gas cylinders, 4) oxygen analyzers, 5) air compressors, 6) oxygen concentrators.

E1.1.6 Identify vacuum system components. Include: 1) regulators, 2) oropharyngeal/tracheal suction cannisters.

E1.1.7 Identify patient breathing circuits. Include: 1) IPPB circuits, 2) incentive breathing devices.

E1.1.8 Identify manometers and gauges. Include: 1) inspiratory/expiratory force (pressure) meters, 2) simple Bourdon-Type gauges, 3) simple manometers.

E1.1.9 State the purpose and application of non-life support equipment.

E1.1.10 Identify the components and ancillary equipment for patient application of non-life support equipment.

E1.1.11 Assemble for patient use the following non-life support equipment: 1) oxygen administration devices, 2) aerosol generators, 3) humidifiers, 4) gas delivery, metering, and analyzing devices, 5) vacuum system components, 6) patient breathing circuits, 7) manometers and gauges.

E1.1.12 Disassemble the following non-life support equipment: 1) oxygen administration devices, 2) aerosol generators, 3) humidifiers, 4) gas delivery, metering, and analyzing devices, 5) vacuum system components, 6) patient breathing circuits, 7) manometers and guages.

E1.1.13 Demonstrate the procedure to verify proper assembly of non-life support equipment for patient use. (E1.1.11)

TASK/COMPETENCY

1.2 Prepare life-support equipment for patient use

ENABLING OBJECTIVES

E1.2.1 Explain the importance and relevance of life-support equipment.

E1.2.2 Identify the following life-support equipment: 1) adult volume ventilators, 2) adult pressure ventilators, 3) pediatric/neonatal ventilators, 4) continuous mechanical ventilation circuits, 5) adult and neonatal CPAP systems, 6) CPAP circuits, 7) pressure/volume alarms, 8) self-inflating, non-self-inflating manual resuscitators, 9) demand value (PEEP) manual resuscitators.

E1.2.3 Recall the purpose and application of life-support equipment.

E1.2.4 Identify the components and ancillary equipment for patient application of life-support equipment.

E1.2.5 Assemble for patient use the following life-support equipment: 1) adult volume ventilators, 2) adult pressure ventilators, 3) pediatric/neonatal ventilators, 4) continuous mechanical ventilation circuits, 5) adult and neonatal CPAP systems, 6) CPAP circuits, 7) pressure/volume alarms, 8) self-inflating, non-self-inflating manual resuscitators, 9) demand valve (PEEP) manual resuscitators.

E1.2.6 Disassemble for cleaning the following life-support equipment: 1) adult volume ventilators, 2) adult pressure ventilators, 3) pediatric/neonatal ventilators, 4) continuous mechanical ventilation circuits, 5) adult and neonatal CPAP systems, 6) CPAP circuits, 7) pressure/volume alarms, 8) self-inflating, non-self-inflating manual resuscitators, 9) demand valve (PEEP) manual resuscitators.

E1.2.7 Demonstrate the procedure to verify proper assembly of life-support equipment for patient use. (E1.2.5)

TASK/COMPETENCY

1.3 Prepare diagnostic equipment for patient use

ENABLING OBJECTIVES

E1.3.1 Explain the importance and relevance of diagnostic equipment.

E1.3.2 Identify the following diagnostic equipment: 1) portable spirometers, 2) electronic devices for recording flow, compliance, resistance, rate, and volume.

E1.3.3 State the purpose and application of diagnostic equipment.

E1.3.4 Identify the components and ancillary equipment for patient application of diagnostic equipment.

E1.3.5 Assemble for patient use portable spirometers and electronic devices used to record flow, compliance, resistance, rate, and volume.

E1.3.6 Disassemble for cleaning portable spirometers and electronic devices used to record flow, compliance, resistance, rate, and volume.

E1.3.7 Demonstrate the procedure to verify the proper operation and assembly of diagnostic equipment. (E1.3.5)

TASK/COMPETENCY

1.4 Clean and disinfect or sterilize non-life support respiratory therapy equipment

ENABLING OBJECTIVES

E1.4.1 Define and classify particulates, bacteria, viruses, fungi, rickettsiae, and spores.

E1.4.2 List and explain infectious hazards in regard to respiratory therapy equipment.

E1.4.3 Define clean, disinfect, and sterilize.

E1.4.4 Outline proper cleaning, disinfecting, and sterilizing methods.

E1.4.5 Recall, explain, and demonstrate safe practice in cold liquid disinfection and sterilization.

E1.4.6 Recall, explain, and demonstrate safe practice in gas sterilization.

E1.4.7 Differentiate between disposables and reusables in non-life support equipment.

E1.4.8 Identify acceptable alternative methods for sterilizing and disinfecting reusable equipment.

E1.4.9 Package for sterilization appropriate components and ancillary equipment.

E1.4.10 Define the proper procedure to take in case of faulty and defective equipment or an equipment failure.

TASK/COMPETENCY

1.5 Clean and disinfect or sterilize life-support equipment

ENABLING OBJECTIVES

E1.5.1 Apply cleaning, disinfecting, and sterilizing terminology to life-support equipment.

E1.5.2 Relate the importance of infectious hazard awareness when cleaning life-support equipment.

E1.5.3 Differentiate among those portions of a ventilator or CPAP system which must be disinfected or sterilized.

E1.5.4 Identify the mode of disinfection or sterilization appropriate to each portion of the ventilator to be processed.

E1.5.5 Outline proper procedures to disinfect/sterilize indicated portions of ventilator.

E1.5.6 Outline proper procedures to disinfect/sterilize indicated portions of CPAP system.

TASK/COMPETENCY

1.6 Clean and disinfect or sterilize diagnostic equipment

ENABLING OBJECTIVES

E1.6.1 Recall cleaning, disinfecting, and sterilizing terminology such as bacteria, viruses, and fungi, and relate their importance to disinfecting or sterilizing diagnostic equipment.

E1.6.2 State the importance of infectious hazard awareness when cleaning diagnostic equipment.

E1.6.3 Identify the mode of disinfection or sterilization appropriate to the piece of diagnostic equipment to be processed.

E1.6.4 Differentiate among those portions of a spirometer or recording device which must be disinfected or sterilized.

TASK/COMPETENCY

1.7 Demonstrate proper safety precautions in the transport and delivery of equipment

ENABLING OBJECTIVES

E1.7.1 Outline methods of safe movement of equipment through a hospital environment.

E1.7.2 Identify potential hazards associated with the movement of non-life support respiratory therapy equipment, life-support equipment, or diagnostic equipment through the hospital environment.

E1.7.3 Identify safety measures related to the delivery and placement of the equipment in patient care areas of a hospital environment.

TASK/COMPETENCY

1.8 Change and periodically monitor performance of non-life support equipment in patient care areas of a hospital

ENABLING OBJECTIVES

E1.8.1 Differentiate between life-support and non-life support equipment.

E1.8.2 Demonstrate proper communications with the patient whose equipment is being changed.

E1.8.3 Identify safety measures to be taken before, during, and after changing routine non-life support equipment.

E1.8.4 Outline the procedure for changing an oxygen delivery device which is in use on a patient.

E1.8.5 Demonstrate the procedure to verify the proper operation of non-life support equipment.

TASK/COMPETENCY

1.9 Demonstrate proper procedures for handling, maintaining, storing, and transporting flowmeters, regulators, gauges, and compressed gas cylinders

ENABLING OBJECTIVES

E1.9.1 Identify and differentiate among the different safety systems.

E1.9.2 Identify the potential dangers associated with the use and transportation of oxygen in a hospital.

E1.9.3 Identify safety measures associated with the use, transportation, and storage of oxygen in a hospital.

E1.9.4 Outline the procedures for handling, maintaining, storing, and transporting flowmeters, regulators, gauges, and compressed gas cylinders.

TASK/COMPETENCY

1.10 Demonstrate proper procedures for changing flowmeters, regulators, gauges, and compressed gas cylinders

ENABLING OBJECTIVES

E1.10.1 Demonstrate the correct procedure for reading the cylinder pressure remaining in any compressed gas cylinder.

E1.10.2 Identify the tools necessary to remove the regulator from a compressed gas cylinder.

E1.10.3 List possible hazards involved in changing the regulator on a compressed gas cylinder.

E1.10.4 Outline the procedure for changing flowmeters, regulators, gauges, and compressed gas cylinders.

E1.10.5 Demonstrate the procedure to verify proper operation of the flowmeters, regulators, gauges, and compressed gas cylinders.

TASK/COMPETENCY

1.11 Demonstrate proper procedures for changing and monitoring of bulk manifold compressed gas cylinders

ENABLING OBJECTIVES

E1.11.1 Define a bulk gas system.

E1.11.2 Define and identify the components of a manifold system.

E1.11.3 Define and identify the components of a piping delivery system.

E1.11.4 Identify the items to be monitored in a bulk manifold compressed gas system.

E1.11.5 Outline the procedure for changing a bulk manifold compressed gas system.

E1.11.6 Demonstrate the procedure to verify proper operation of a bulk manifold compressed gas system.

DUTY AREA: 2. OBSERVING QUALITY CONTROL MEASURES FOR EQUIPMENT DISTRIBUTION AND PROCESSING

TASK/COMPETENCY

2.1 Test non-life support respiratory therapy equipment for proper operation and patient readiness.

ENABLING OBJECTIVES

E2.1.1 Demonstrate the procedure to verify that all equipment components are present and assembled properly with all necessary accessories.

E2.1.2 Demonstrate a safety check of all components of any equipment employed for patient use.

E2.1.3 Examine all equipment components for cleanliness and/or appropriate disinfection or sterilization and packaging.

E2.1.4 Demonstrate the procedure to verify that all equipment functions as required.

E2.1.5 Examine equipment for defects from manufacture, use, or abuse.

TASK/COMPETENCY

2.2 Test life support respiratory therapy equipment for proper operation and patient readiness

ENABLING OBJECTIVES

E2.2.1 Demonstrate the procedure to verify that all equipment components are present and assembled properly with all necessary accessories.

E2.2.2 Demonstrate a safety check of all components of any equipment employed for patient use.

E2.2.3 Examine all equipment components for cleanliness and/or appropriate disinfection or sterilization and packaging.

E2.2.4 Demonstrate the procedure to verify that all equipment functions as required.

E2.2.5 Examine equipment for defects from manufacture, use, or abuse.

TASK/COMPETENCY

2.3 Test diagnostic equipment for proper operation and patient readiness

ENABLING OBJECTIVES

E2.3.1 Demonstrate the procedure to verify that all equipment components are present and assembled properly with all necessary accessories.

E2.3.2 Demonstrate a safety check of all components of any equipment employed for patient use.

E2.3.3 Examine all equipment components for cleanliness and/or appropriate disinfection or sterilization and packaging.

E2.3.4 Demonstrate the procedure to verify that all equipment functions as required.

E2.3.5 Examine equipment for defects from manufacture, use, or abuse.

TASK/COMPETENCY

2.4 Perform quality control procedures for disinfection and sterilization techniques

ENABLING OBJECTIVES

E2.4.1 Define spore strip, and explain how it is used to guarantee sterilization of equipment.

E2.4.2 Explain why proper dating of sterilized equipment is necessary.

E2.4.3 Explain why proper documentation of disinfection and sterilization procedures is necessary to protect hospital patients.

E2.4.4 Identify circumstances which would warrant replacement of liquid disinfectant/ sterilization agents.

DUTY AREA: 3. MAINTAINING INFECTION CONTROL STANDARDS

TASK/COMPETENCY

3.1 Use aseptic technique in working with equipment contaminated with pathogenic microorganisms

ENABLING OBJECTIVES

E3.1.1 Define and explain techniques associated with the following terms: septic, aseptic, contagious, and isolation.

E3.1.2 Identify steps which may be taken to protect against contamination while working with unclean equipment.

E3.1.3 Outline measures which may be taken to clean and disinfect equipment contaminated with pathogenic microorganisms.

TASK/COMPETENCY

3.2 Clean and disinfect environmental work surfaces

ENABLING OBJECTIVES

E3.2.1 Identify terms related to cleaning and disinfecting.

E3.2.2 Outline measures which may be taken to clean and disinfect environmental work surfaces in the equipment processing area of a respiratory therapy department.

TASK/COMPETENCY

3.3 Maintain a clean and orderly equipment washing-disinfection-sterilization-packaging area

ENABLING OBJECTIVES

E3.3.1 Diagram and explain the flow of equipment through a respiratory therapy department; include a dirty equipment processing area, clean equipment area, sterile packaging area, and equipment storage area.

E3.3.2 Outline steps which may be taken to maintain a department in a clean and orderly fashion and describe their impact on infection control.

E3.3.3 List inappropriate infection control practices.

E3.3.4 Identify potential hazardous situations and ways to prevent these situations.

DUTY AREA: 4. PROVIDING CLERICAL AND COMMUNICATIONS ASSISTANCE

TASK/COMPETENCY

4.1 Process incoming telephone calls for a respiratory therapy department

ENABLING OBJECTIVES

E4.1.1 Outline and demonstrate proper telephone etiquette and protocol.

E4.1.2 Outline and describe the nature of incoming telephone calls into a respiratory therapy department in terms of their different purposes and urgencies.

E4.1.3 Demonstrate how to route communications to appropriate personnel in the respiratory therapy department.

TASK/COMPETENCY

4.2 Provide written documentation of operations in records, logs, charts, and reports in proper and complete form

ENABLING OBJECTIVES

E4.2.1 Identify the types of various written records, forms, and documentation necessary for a department of respiratory therapy.

E4.2.2 Explain the purposes of written records, forms, and documentation.

TASK/COMPETENCY

4.3 Demonstrate clear and tactful written and verbal communications

ENABLING OBJECTIVES

E4.3.1 Demonstrate proper spelling of names of commonly used equipment and procedures.

E4.3.2 Write out the full names of commonly used acronyms such as IPPB, CPAP, IMV, CMV, PEEP, SIMV, IPPV, etc.

E4.3.3 Recall and outline the titles and general duties of supervisory personnel in respiratory therapy, nursing, and hospital administration.

E4.3.4 Demonstrate error-free written recording of equipment and procedures requested by hospital personnel over the phone.

E4.3.5 Outline the proper procedure to report defective equipment or equipment failure.

PROGRAM DESCRIPTION

The Health Careers Cluster Program is a system of courses, clinical experiences, on-the-job training, curriculum, and other arrangements, designed:

- to introduce students to careers in health occupations education
- to prepare students with marketable skills at the assistant level to work in the health care industry
- to facilitate students' entry into advanced health occupations programs and
- to enable students to become more knowledgeable consumers.

Potential careers are in the areas of allied health, dentistry, medicine, and nursing. The Respiratory Therapy Assistant is one career preparation opportunity in the allied health area.

COURSE TITLE:	HEALTH ASSISTANT II--8332
DESCRIPTION:	Health Assistant II is a triple-period occupational preparation course offered at the twelfth-grade level with emphasis given to advanced skill training. Respiratory therapy is one available track for students interested in pursuing a career as a respiratory therapy assistant or in postsecondary training leading to certification as a respiratory therapist, or respiratory therapy technician.
CIP CODE:	17.0819
SUGGESTED GRADE LEVEL:	12
PREREQUISITE:	Health Assistant I--8331
	Health Assistant I is a double-period occupational preparation course offered at the eleventh-grade level. Development of basic skills common to several assisting careers is emphasized. The student will study body structure and function, principles of health, microbes, and disease, and will have an overview of the national health and patient care system. Supervised on-the-job training will be given in hospitals, nursing homes, or public health agencies.

The following courses, although not required for admission into Health Assistant I, are strongly recommended as background for continuing study of health occupations.

Introduction to Health Occupations--8302

Introduction to Health Occupations is a single-period course which introduces the student to all health occupations and develops basic skills common to all health occupations. The course is recommended as the first course for the following occupational offerings:

Practical Nursing I--8357
Nurses's Aide I--8360
Health Assistant I--8331
Emergency Medical Technician I--8333
Dental Aide I--8328
Medical Assistant I--8345

Students study families of health careers, such as dental, medical, nursing services, and allied health occupations. Introduction to a core of basic health care skills prepares students for advanced occupational skill training. Organizations for health care, financing of patient services, and ethics also are studied. Field trips to health care facilities and interviews with selected health workers can be included. Student volunteer activities in health care facilities are organized by the teacher. The course is recommended for 9th and 10th grade students.

Health Occupations Exploratory--8370

Health Occupations Exploratory is a one-semester course taught one period a day following an orientation course such as "Careers and You." Students explore families of health careers and related occupations and have hands-on experiences with basic health care skills. The course is recommended for any grade level in the middle school.

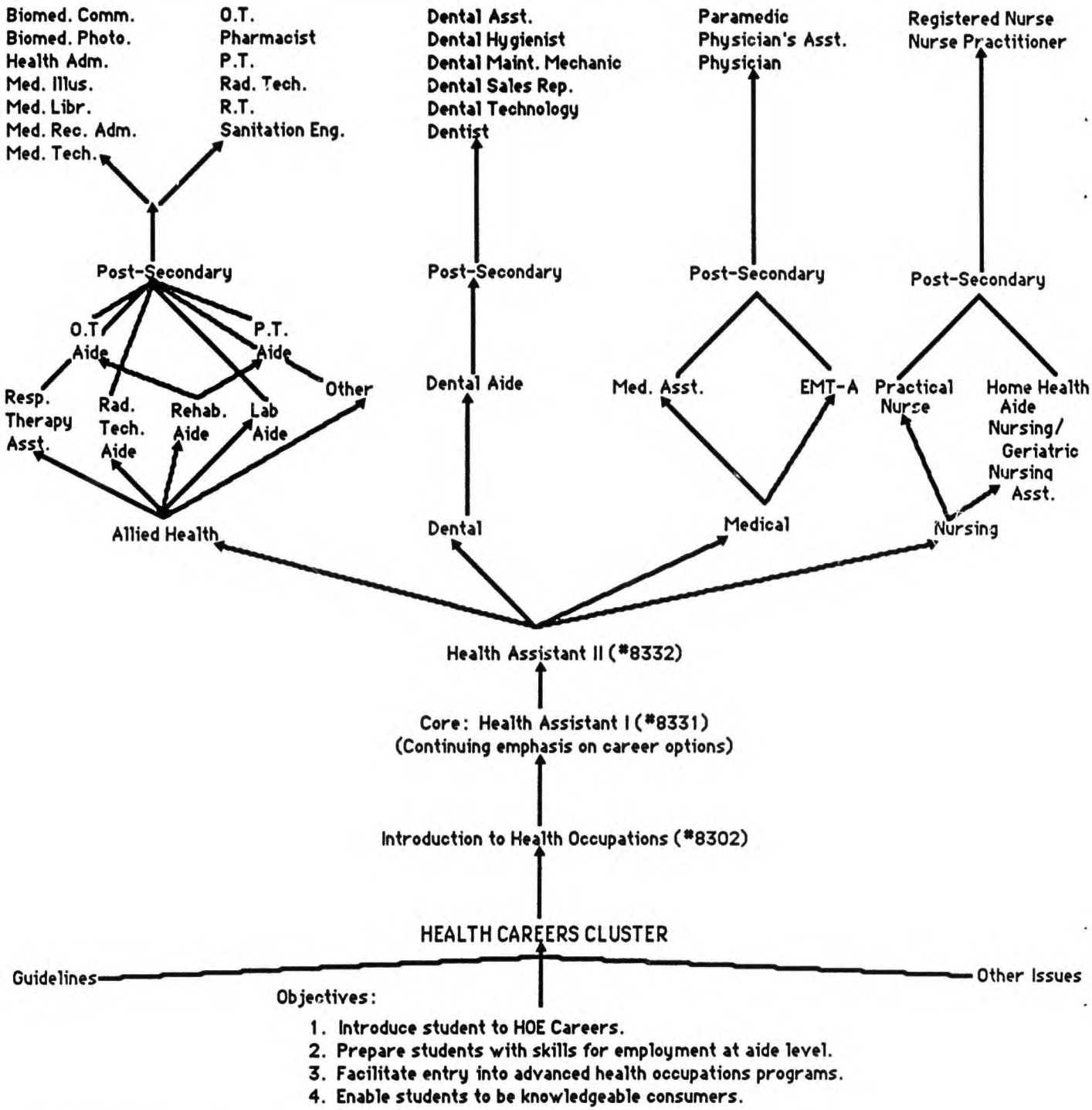
WORKER DESCRIPTION: RESPIRATORY THERAPY ASSISTANT

The Respiratory Therapy Assistant is an individual trained to prepare, maintain, measure, and document performance of respiratory therapy equipment. Direct patient contact is limited to changing and monitoring non-life support equipment. The worker functions under the supervision of a respiratory therapy practitioner and does not initiate or provide therapy. Major duty areas are:

1. Providing equipment for patient use and observing safety measures
2. Observing quality control measures for equipment distribution and processing
3. Maintaining infection control standards
4. Providing clerical and communications assistance.

CONCEPTUAL OVERVIEW: HEALTH CAREERS CLUSTER

Career Examples: There are more than 200 health occupational titles.



Health Occupations Service
Virginia Department of Education

CONTENT OUTLINE

RESPIRATORY THERAPY ASSISTANT

CONTENT OUTLINE	TASK/COMPETENCY CODE
I. Providing Equipment for Patient Use and Observing Safety Measures	
A. Analyzing Non-life Support Equipment	1.1
1. Definition and general explanation of importance and relevance	1.1.1
2. Explanation of equipment	1.1.2
a. Oxygen administration devices	
(1) Nasal cannula	
(2) Single mask	
(3) Partial rebreathing mask	
(4) Non-rebreathing mask	
(5) Face tent	
(6) Tracheostomy (masks) collars	
(7) T-adapters (Briggs-T)	
(8) Air entrainment masks	
(9) Oxyhoods	
(10) Croupettes	
(11) Trach-talks	
b. Aerosol generators	1.1.3
(1) Nebulizers, pneumatic	
(2) Nebulizers, ultrasonic	
c. Humidifiers	1.1.4
(1) Bubble-type	
(2) Cascade/passover-type	
d. Gas delivery, metering, analyzing devices	1.1.5
(1) Regulators, reducing valves, connectors, flowmeters	
(2) Air-oxygen blenders	
(3) Gas cylinders	
(4) Oxygen analyzers	
(5) Air compressors	
(6) Oxygen concentrators	
e. Vacuum system components	1.1.6
(1) Regulators	
(2) Oropharyngeal/tracheal suction cannisters	
f. Patient breathing circuits	1.1.7
(1) IPPB circuits	
(2) Incentive breathing devices	

CONTENT OUTLINE	TASK/COMPETENCY CODE
I. A. 2. g. Manometers and gauges	1.1.8
(1) Inspiratory/expiratory force (pressure) meters	
(2) Simple Bourdon-Type gauges	
(3) Simple manometers	
3. Purpose and application of equipment	1.1.9
4. Identification of devices of equipment	1.1.10
a. Components	
b. Ancillary equipment for patient application	
5. Assembly of equipment	1.1.11
a. Basic operations	
b. Assembly of components with ancillary equipment	
c. Verification of proper assembly	
6. Disassembly of equipment	1.1.12
a. Distinction between non-disposable and disposable components and ancillary equipment	
b. Proper disposal	
c. Cleaning preparation	
7. Verification of equipment operation and assembly	1.1.13
a. Proper equipment operation	
b. Proper equipment assembly	
c. Documentation procedures	
B. Analyzing Life-Support Equipment	1.2
1. Definition and explanation of importance and relevance	1.2.1
2. Explanation of equipment	1.2.2
a. Adult volume ventilators (CMV, PEEP, IMV) and circuits	
b. Adult pressure ventilators and circuits	
c. Adult and neonatal CPAP systems, including circuits	
d. Pressure/volume alarms	
e. Manual resuscitators (self-inflating, non-self inflating, demand/PEEP)	
3. Purpose and application of equipment	1.2.3
4. Identification of devices of equipment	1.2.4
a. Components	
b. Ancillary equipment for patient application	

CONTENT OUTLINE	TASK/COMPETENCY CODE
I. B. 5. Assembly of equipment	1.2.5
a. Basic operations	
b. Assembly of components with ancillary equipment	
c. Verification of proper assembly	
6. Disassembly of equipment	1.2.6
a. Distinction between non-disposable and disposal components and ancillary equipment	
b. Proper disposal	
c. Cleaning preparation	
7. Verification of equipment operation and assembly	1.2.7
a. Proper equipment operation	
b. Proper equipment assembly	
c. Documentation procedures	
C. Analyzing Diagnostic Equipment	1.3
1. Definition and explanation of importance and relevance	1.3.1
2. Explanation of equipment	1.3.2
a. Portable spirometers	
b. Electronic devices for recording flow, compliance, resistance, rate, and volume	
3. Purpose and application of each device	1.3.3
4. Identification of application devices for equipment	1.3.4
a. Components	
b. Ancillary equipment for patient application	
5. Assembly of equipment	1.3.5
a. Basic operations	
b. Assembly of components with ancillary equipment	
c. Verification of proper assembly	
6. Disassembly of equipment	1.3.6
a. Distinction between non-disposable and disposable components and ancillary equipment	
b. Proper disposal	
c. Cleaning preparation	
7. Verification of equipment operation and assembly	1.3.7
a. Proper equipment operation	

CONTENT OUTLINE	TASK/COMPETENCY CODE
I. C. 7. b. Proper equipment assembly c. Documentation procedures	
D. Cleaning, Disinfecting, or Sterilizing Equipment	1.4-1.6
1. Classification and properties affecting growth of common contaminants a. Particulates b. Bacteria c. Viruses d. Fungi e. Rickettsiae f. Spores	1.4.1, 1.5.1, 1.6.1
2. Infectious hazards and respiratory therapy equipment	1.4.2, 1.5.2, 1.6.2
3. Definitions a. Clean b. Disinfect c. Sterilize	1.4.3
4. General procedures for cleaning, disinfecting, and sterilizing a. Cleaning methods (1) Identifying and disposing of faulty equipment (2) Common methods b. Disinfecting methods c. Sterilizing methods (1) Cold liquid (2) Gas (3) Autoclaving (4) Pasteurization	1.4.4-1.4.6
5. Procedures for cleaning non-life support, life-support, and diagnostic equipment a. General description of alternatives and safe practice b. Alternatives for specific types of equipment	1.4.7-1.4.10 1.5.3-1.5.6 1.6.3, 1.6.4
6. Procedures for disinfecting non-life support, life-support and diagnostic equipment a. General description of alternatives and safe practice b. Alternatives for specific types of equipment	1.4.7-1.4.10 1.5.3-1.5.6 1.6.3, 1.6.4
7. Procedures for sterilizing non-life support, life-support and diagnostic equipment	1.4.7-1.4.10 1.5.3-1.5.6 1.6.3, 1.6.4

CONTENT OUTLINE	TASK/COMPETENCY CODE
I. D. 7. a. General description of alternatives and safe practices	
b. Alternatives for specific types of equipment	
E. Transporting and Delivering Equipment with Proper Safety Precautions	1.7
1. Alternative methods of safe movement of equipment through a hospital environment	1.7.1
2. Potential hazards of equipment transport through a hospital environment	1.7.2
3. Safety measures related to delivery and placement of equipment in patient care areas	1.7.3
a. Contamination prevention	
b. Securing of equipment during transport, proper use of dollies and carriers	
c. Proper placement in patient care areas: treatment rooms, nursing stations, patient rooms	
d. Proper posting of signs and precautions	
e. Identification of common electrical and mechanical hazards around RT equipment	
F. Changing and Monitoring Non-Life Support Equipment in Patient Use	1.8
1. Proper patient communication during equipment change	1.8.1, 1.8.2
2. Safety measures taken before, during, and after patient equipment change	1.8.3
3. Procedures for changing non-life support devices in use on patient	1.8.4
4. Proper operation of non-life support equipment in use on a patient verification	1.8.5
G. Working with Gauges, Regulators, and Compressed Gas Cylinders	1.9-1.11
1. Definitions, descriptions, and functions of each related structure	1.9.1
a. Pin-Index Safety System	
b. Diameter Index Safety System	
c. American Standard Inlet and Outlet Connection Safety System	
d. Quick-connect safety system	
e. Bulk gas system	
f. Manifold system	

CONTENT OUTLINE	TASK/COMPETENCY CODE

I. G. 1. g. Compressed gas cylinders
h. Flowmeter
i. Regulator

2. Procedures related to flowmeters, regulators, gauges, and compressed air cylinders — 1.9.2-1.9.4, 1.10.1-1.10.5
a. Alternative types
b. Proper function and operation
c. Procedures for proper reading
d. Proper tools and procedures for changing
e. Verification of proper operation while in use
f. Common hazards associated with use and proper safety measures
g. Suggestions for handling, transportation, and storage

3. Procedures related to bulk manifold compressed gas cylinders — 1.11.1-1.11.6
a. Identification and roles of regulating agencies
b. Operation and monitoring of bulk gas systems
c. Operation and monitoring of manifold systems
d. Piping systems
e. Procedures for changing a bulk manifold compressed gas system
f. Verification of proper operation of a bulk manifold compressed gas system
g. Compressed gas cylinders
(1) Manufacture
(2) Types
(3) Markings
(4) Transportation in the hospital
(5) Handling and storage of
(6) Proper tools and procedures for changing
(7) Hazards associated with use
(8) Verification of proper operation while in use

II. Observing Quality Control Measures for Equipment Distribution and Processing

A. Testing Equipment for Proper Operation and Readiness — 2.1-2.3

1. Major quality control measures — 2.1, 2.2, 2.3
a. Verification that necessary components are present and assembled properly
b. Component safety check
c. Verification of cleanliness and that components have been disinfected, sterilized, and packaged properly

CONTENT OUTLINE	TASK/COMPETENCY CODE
II. A. 1. d. Verification of proper function	
e. Observation of equipment for defects from manufacture, use, or abuse	
2. Applications of specific procedures for testing non-life support equipment	2.1.1-2.1.5
a. Oxygen administration equipment	
b. Adult pressure ventilators and circuits	
c. CPAP systems	
d. Pressure/volume alarms	
e. Manual resuscitators	
3. Applications of specific procedures for testing life-support equipment	2.2 2.2.1-2.2.5
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b. Adult pressure ventilators and circuits	
c. CPAP systems	
d. Pressure/volume alarms	
e. Manual resuscitators	
4. Applications of specific procedures for testing diagnostic equipment	2.3 2.3.1-2.3.5
a. Portable spirometers	
b. Electronic devices for recording flow, compliance, resistance, rate, volume	
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2. Dating of sterilized equipment	2.4.2
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2. Aseptic	
3. Contagious	
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CONTENT OUTLINE			TASK/COMPETENCY CODE
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		2. Principles	
		3. Applications	
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	G.	Recognizing Inappropriate Infection Control Practices	3.3
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CONTENT OUTLINE				TASK/COMPETENCY CODE
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