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ABSTRACT

A curriculum guide for grade 8, the document is devoted to the occupational cluster "Health Occupations." It is divided into four units: the hospital, preventive medicine, drug use and abuse, and alcohol and tobacco. Each unit is introduced by a statement of the topic, the unit's purpose, main ideas, guests, and a list of career opportunities (positions) available in that area. Next, the areas of language arts, mathematics, science, social studies, home economics, industrial arts, music, and physical education (when applicable) are subdivided into purpose, objectives, activities, materials, and notes with a statement relating these categories to the unit topic. The document is one of ten curriculum guides at the seventh and eighth grade levels presenting a career education emphasis. The teacher's manual for the series is available as CE 001 041. The other guides are: consumer and homemaking (CE 001 042); communications and media (CE 001 043); fine arts and humanities (CE 001 044); construction and environment (CE 001 045); agri-business, natural resources, marine science (CE 001 046); public service occupations (CE 001 047); manufacturing, marketing and distribution, business and office occupations (CE 001 049); transportation (CE 001 050); and hospitality, recreation, and personal service occupations (CE 001 051). (AG)

GRADE 8: CLUSTER II

Health Occupations

HEALTH OCCUPATIONS

ED 089010

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA
Presidential Building
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CE 001 048

CAREER DEVELOPMENT EXEMPLARY PROJECT

An
Interdisciplinary
Course of Study
for
Grades Seven and Eight

Public Schools of the District of Columbia
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James T. Guines, Associate Superintendent
for Instructional Services
Paul E. Cawein, State Director
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These materials were designed and tested under the provisions of Part D of Public Law 90-576 of the Vocational Education Amendments of 1968.

ERIC

CAREER DEVELOPMENT EXEMPLARY PROJECT

Curriculum Guides Prepared by

THE METROPOLITAN EDUCATIONAL COUNCIL FOR STAFF DEVELOPMENT

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September 1972

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GRADE 8

CAREER CLUSTER MODULE

II

HEALTH OCCUPATIONS

UNITS/TOPICS

1. The Hospital
2. Preventive Medicine
3. Drug Use and Abuse
4. Alcohol and Tobacco

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* 8 = Grade Level; II = Cluster Number; and, 136 = Page Number.

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CLUSTER 2 - Grade 8

HEALTH OCCUPATIONS

Unit/Topic 1 - The Hospital

ERIC

Topic: The Hospital

Purpose: To explore occupational opportunities in hospitals

To broaden the students' concepts of hospital services

1. organization
   a. physical plant
   b. personnel
   c. control
2. functions
   a. clinic
   b. general
   c. specialized
3. financing

Main Ideas:

1. Occupational opportunities in Washington, D.C. Metropolitan Area Hospitals and as U.S. army/navy nurses
2. The control of hospitals
   a. private
   b. city
   c. state
   d. federal
3. The clinical services
   a. outpatient
   b. baby care
   c. maternity
   d. hearing
   e. dental
   f. eye
   g. venereal disease
   h. psychiatric
   i. animal
4. Methods of financing hospitals and clinics
   a. private
   b. city
   c. state or county
   d. federal

Quests:

1. Interview and ride with an ambulance driver
2. Administer First Aid to one suffering from
   a. excessive heat
   b. severe cuts and burns
   c. drowning
   d. swallowing poison
   e. possible heart attacks

Quests -- Continued

f. accidents
g. falling and sustaining sprains
h. epilepsy
i. shock
j. diabetics

3. Research the story of the hospital ship, HOPE.

Career Opportunities:

1. Unskilled

Cafeteria workers, dishwasher, janitor, laundry worker

2. Semi-Skilled

Addressograph machine operator, billing clerk, dining room supervisor, duplicating machine operator general hospital aide, invoice clerk, key punch operator, laboratory aide, maintenance man, nurse's aide, personnel clerk, pharmacy aide, physical medicine aide, receiving clerk, receptionist, recreation therapy aide, switchboard operator

3. Skilled

Catering manager, chef, clerk stenographer, cook, cost clerk, dental assistant, dental lab. technician, employment interviewer, laboratory technician, licensed practical nurse, medical records librarian, medical secretary, mortician, payroll clerk, personnel assistant, secretary

4. Professional

Accountant, anesthetist, biochemist, biologist, chemist, chiropractor, dentist, dietician, executive chef,hospital administrator, medical technologist, nurse-head, nursing director, occupational therapist,optometrist, osteopathic physician, personnel manager, pharmacist, physical therapist,physician, podiatrist, protestant minister, psychologist, purchasing agent, Rabbi, recreation therapy leader, staff nurse

LANGUAGE ARTS

Purpose: To explore the organization and services of hospitals and possible careers in them.

To extend comprehension and graphemic encoding skills.

Objectives: Upon completion of work in this unit the student should be able to:

1. Describe the general organization of a hospital and its services; list occupational opportunities and identify their relation to the organization and services; and to describe at least one such occupation (title, responsibilities and duties, entry requirements, salary and advancement, etc.).

2. Establish logical and chronological sense when reporting on print and film materials.

3. Distinguish main ideas from supporting detail.

4. Identify correct handwriting skills: formation of letters, punctuation, spacing, capitalization, spelling, paragraphing.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Develop a manuscript, "Guidelines for Good Graphemics," to be printed and used as a checklist in each student's Hospital Handbook (Activity 2. below). Tie-In with Industrial Arts.

2. Make a Hospital Handbook. All entries will be checked for graphemic correctness in relation to the checklist from Activity 1. The entries should include:

   a. Hospital organization. A properly labeled photograph, drawing, or block diagram of an actual or hypothetical hospital.
   b. Hospital services. A list of the main services offered by hospitals and an illustrated description of one of these, such as the emergency ward, obstetrics ward, etc.
   c. Hospital occupations. A list of occupations, organized by the services from b. above, and a description of one such occupation. This latter can be an oral report, with the notes for it entered in the notebook.

Activities -- Continued

d. Clippings of newspaper and magazine articles.
e. Personal notes about experiences in the hospital, people the student knows who work in a hospital, etc.

3. View films and prepare writeups (See films listed under materials). The writeups should focus on specific aspects of the following language arts skills:

   a. Logical and chronological sequences within the films.
   b. Handwriting skills in the writeups: see Objective 4.
   c. Graphemic correctness.

4. Quests:

   a. Prepare oral/written reports on field trips (hospital, blood bank, eye bank, clinics, etc.). If oral, must be given from written notes.
   b. Personal essay on some volunteer service performed; use the diary form of Connie McGregor (see film listing).
   c. Prepare displays illustrating how careless handwriting can be costly in money, wasted time, etc. Tie-In with Social Studies--research skills.
   d. Prepare displays showing concept of main ideas and supporting information; e.g., a paragraph to the left, with main idea information underlined and a statement of the main idea to the right. Use information from literature about hospitals and their services.

Materials:

1. Films:
   a. "Nurses in the Army" (U.S. Govt. Films, 27 min.)
   b. "The Doctor" (U. of Iowa)
   c. "In a Medical Library" (U. of Iowa)
   d. "The Professional Nurse" (U. of Iowa)
   e. "The Diary of Connie McGregor" (Prince Georges)
   f. "Improve Your Handwriting" (Coronet)
2. Visuals:
   a. Alphabet wall charts
   b. Teacher correction rulers (Zaner-Bloser)

MATHEMATICS

Purpose: To explore occupational opportunities in hospitals by using mathematics to assist in indicating needs in various hospital careers.

Objectives: Upon completion of work in this unit the student should be able to:

1. Perform the four fundamental operations with arithmetic numbers and percents.

2. To add whole numbers with five or more addends up to five or more digits with regrouping when necessary.

3. Use pattern recognition of data from a survey to estimate figures for the coming year.

4. Divide arithmetic numbers including two, three, and four digit divisors.

5. Solve verbal problems requiring any of the four fundamental operations with whole numbers and fractions.

6. Demonstrate graphically and pictorially the meanings of arithmetic numbers and percentages.

7. Arrange a given set of decimal fractions in increasing and decreasing order, and to solve verbal problems involving decimal fractions in calculating percentages.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Survey the number of persons treated by Freedman's Hospital during a weekend period. Use the following types of diseases or incidents: (a) respiratory; (b) heart; (c) heat or cold exposure; (d) wounds (gun shot and knife); (e) accidents (auto and home). Tie-In with Social Studies--research skills.

2. Calculate (for the data from 1) the percentage of each type of disease or incident treated during this period. Demonstrate pictorially these percentages.

3. Research the amount of money paid annually to Hospital Center and another hospital from private, city, state, and federal sources. Calculate the percentage received from each source by each hospital and compare the fund-

Activities -- Continued

ing sources for the two hospitals. Represent this data graphically.

4. Survey the Minischool to determine the number of individuals working in the following careers: nursing, social service, and food service. Tie-In with Social Studies--surveys.

5. Calculate the percentages of each group from 4. Convert the percentages to decimal fractions and arrange them in increasing and decreasing order.

6. Collect data on the cost of hospital rooms and services for at least the past five years and prepare graphs to show the results. Then have them use pattern recognition to make predictions for the next year or more.

7. Determine the number of persons employed at Washington Hospital Center. Classify the information into the various career categories. Calculate the percentage for each category. Make a chart using each category percentage. Tie-In with Art.

Materials:

1. Charts
2. Access to information on hospital costs and occupational opportunities in hospital careers.

SCIENCE

Purpose: To explore how electrical technology can be applied to saving human lives in the area of heart care.

Students may view the hospital as a large and awesome place filled with complex equipment and procedures. They need to see that the complexity is composed of a number of many direct, specific efforts designed to aid a patient. A study of the dramatic electrocardiograph (EKG) and defibrillator machine may explain some of the mystery of diagnosis of heart conditions and treatment for a patient experiencing heart attack or failure.

Objectives: Upon completion of work in this unit the student should be able to:

1. State briefly electrical aspects of heart action.

2. Describe briefly how the degree of damage to the heart can be assessed through electrocardiograph technology.

3. Discuss how teamwork of medical personnel results in better services to the patient; specifically, describe briefly at least one example of such teamwork.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Teacher-led discussion of the prevalence of heart attacks and heart disease, with focus on such questions as "Who do you know that has had a heart attack or has a heart condition?", "Whom do you know that has to be careful of his/her activities to avoid taxing the heart?". Tie-In with Home Economics to discuss the role of diet to prevent heart disease, specifically the relationship between magnesium and cholesterol.

   a. Form teams of four and listen to the other three members heartbeats - ear against chest method (same sex in each foursome for this activity). Each pupil should try to record differences he notes in each of the three hearts. Time one heart for a minute - how many beats per minute? How does this com-

Activities -- Continued

pare with the average 14 year old?

b. Collect heartbeat rates and characteristics for 10 friends in your community varying in age from infant to senior citizen. Report results to class.

2. Teacher demonstration of the structures of the heart concentrating only on the four chambers, aorta, pace-maker, and coronary vessels (Do not go into the circulatory system; let that be a Quest for advanced students. See 4a below.). Tie-In with Graphic Art to represent the heart pictorially.

3. Teacher demonstration of dissection of chicken hearts and mammalian hearts (calf, beef, pork) to show the chambers. If it is fresh, cook some of it and have the students compare its taste and texture with chicken leg or breast meat. Draw a comparative diagram of parts of different animals' hearts.

4. Teacher demonstration showing how the coronary vessels supply the heart muscle and explanation of how the pace-maker (sinoventricular node) stimulates the heart to contract sucessively in rhythm. Teacher explanation of the defibrillator.

   a. Draw a diagram of the circulatory system, trace the blood from and to the heart, and label all of the major organs and veins through which it passes.
   b. Pupils model a cross-section of the heart and valves in clay or other media. Tie-In with Art.

5. Directed reading with Heart Association pamphlets, followed by teacher-led discussion of what can go wrong with the heart muscle in heart attacks, heart failure, and other forms of heart disease.

6. Teacher discussion of the electrocardiograph (EKG) machine, using overhead transparencies to show its elements and to explain how the EKG machine functions. Tie-In with Mathematics. Look at sections of actual EKG tape. Student discussion of personal

Activities -- Continued

experiences with an EKG.

a. Resource person: Have a physician or medical technician bring in and demonstrate an EKG machine.

7. Teacher discussion of nerve action producing tiny electric currents which can be detected with a sensitive machine and amplified to move a writing stylus across the moving paper tape containing preprinted grids.

   a. If possible, compare normal with abnormal EKG's and write or draw a comparison of them.

8. Quest: Prepare an illustrated oral or written report on the use of continuous electronic monitoring equipment in hospital intensive-care wards.

9. View scenes from films and TV where a machine was used to aid a heart patient in emergency in the hospital. Write a description of the necessity for the heart machine.

10. In teams, prepare displays showing block diagram depictions of medical teamwork: the areas of responsibility and chain of command between patient, nurse, doctor, cardiologist, and EKG technician. Include drawings and pictures as feasible.

11. Teacher-led review/discussion to summarize the facts on electrical aspects of heart physiology and the use of EKG's. List important concepts that should be included on a test.

Materials:

1. Washington Heart Association pamphlets: Washington Heart Association, 2007 Eye Street, N.W., D.C. 20006
   a. Disorders of the Heartbeat. American Heart Association
   b. Heart Attack. American Heart Association
   c. You and Your Heart. American Heart Association
   d. Heart Attack: How to Reduce Your Risk.
   e. Your Heart Has Nine Lives. Alton Blakeslee and Jeremiah Stamler. American Heart Association

Materials -- Continued

2. Overhead projector, transparencies: commercial or teacher made.
3. Charts and model of heart.
4. Pictures of EKG machines.
5. Reference texts: library books at Browne
   a. Zim, Herbert S. Your Heart and How It Works, Morrow, 1959.
   b. Schneider, Leo. Lifeline: The Story of Your Circulatory System. Harcourt, Brace and Co., 1958. pp. 34-36.
   c. World Book Encyclopedia. 1970 Volume 6, p. 155. A good picture of the patient with electrodes attached leading to the machine where a technician is adjusting it. Also shows the pen trace on chart paper. See also the pioneer inventor Willem Einthoven, p. 103.
   d. Encyclopedia Americana. 1970 Volume 10, p. 185i The more technical aspects are given in this article.
6. Films:
   a. "Hemo the Magnificent." 55 min. Bell Telephone System. Pick up from Chesapeake and Potomac Telephone Co. locally. Excellent complete explanation of the circulatory system with animation and actual photographic sequences of blood physiology. From D.C. A-V Department
   b. No. 231 "Heart and Circulation" (S), 10 min., 1937.
   c. No. 962 "Heart and How it Works" (S), 11 min., 1955.
7. Film Strip:
   No. 2080 "Human Circulatory System" (S), color, 1961.

SOCIAL STUDIES

Purpose: To explore the hospital as a social institution involving, for the effective delivery of quality health services, the coordinated and cooperative interaction of interdependent component agencies and services; and to learn of occupational opportunities within it.

As scientific advances in medicine proliferate and the demand for diverse health services accelerates, the hospital has become the center for delivery of health services in various forms. Today's hospitals must, to ensure quality medical care for patients, integrate specific services from various components: data from the medical laboratory, X-rays from radiology, medicines from the pharmacy, etc

Objectives: Upon completion of work in this unit the student should be able to:

1. List one or more illnesses or diseases for which the treatment requires coordination among various hospital components and describe briefly the complex of services associated with one such illness or disease (or other medical condition such as pregnancy).

2. Describe a particular hospital component (agency, facility, service) by stating the function of it, listing the kinds of occupations involved, and describing at least one such occupation (title, responsibilities and duties, entry requirements, salary and advancement, etc.).

3. List the main cost categories associated with a stay in the hospital.

4. List the main sources of funding for hospitals.

5. Describe generally a hospital: list its main components (agencies, facilities, services); list occupational opportunities; and state the usual means by which individuals gain access to the hospital services.

6. Describe briefly the basic features of health plans such as Blue Cross and Blue Shield and the concept of major medical insurance.

Activities: To accomplish these objectives the student may engage in

Activities -- Continued

activities such as:

1. High Impact. Design and execute a series of posters depicting selected aspects of the history of medical care; e.g., comparing ancient and modern treatments for epilepsy, etc. Tie-In with Graphic Art.

2. High Impact. Plan for and arrange a simulated hospital program as a one-day Minischool activity, including:

   a. Teams of students to be responsible for specific components (agencies, facilities, services).
   b. Individual students to be responsible for being with patients with specific medical problems. Tie-In with Language Arts.
   c. Individual students to be responsible for being physicians, nurses, etc. Tie-In with Science, Home Economics for food services.

3. In planning for Activity 2, have individual or teams of students research the hospital to determine the components to be represented by the Minischool Hospital and the medical problems to be represented by the "patients".

4. Resource persons. In planning for Activity 2, have presentations as follows:

   a. Hospital administrator on the organization of a modern hospital. Compare organization with that planned for the Minischool hospital.
   b. Medical insurance plan representative on the nature of Blue Cross, Blue Shield, and major medical plans and the nature of hospital costs. Write a summary of the basic features of each plan.
   c. Calculate cost of an insurance plan for Minischool patient. Tie-In with Mathematics.
   d. Physician to describe the complex of services required to deal with a particular medical condition, such as pregnancy or some illness or disease.

5. Field trips: In planning Activity 2, have groups of students tour hospitals and clinics; e.g., D.C. General, Freedmen's Hospital.

Activities -- Continued

6. In conjunction with Activity 2, design and execute a set of displays, one for the Minischool Hospital (an architectural rendering) and one for each component, the latter to include explanatory notes and listings of occupational opportunities.

7. Quests: Have students prepare oral/written reports on such topics as:

   a. Saturday night in the emergency ward: Who is most likely to be there and why?
   b. The modern ambulance: what does it contain?
   c. Socioeconomic aspects of medical services: how does it affect what happens to you when you require hospital care?
   d. Hospital costs: how and why are they rising?

   Tie-In with Language Arts.

Materials:

1. Pamphlets describing medical insurance plans.
2. Assorted information sources about hospitals.

ART

Purpose: To explore occupational opportunities in art within the hospital setting.

Objectives: Upon completion of work in this unit the student should be able to:

1. Demonstrate knowledge of occupational opportunities in art within the hospital setting; specifically, to be able to list such occupational opportunities and describe at least one (title, responsiblities and duties, entry requirements, salary and advancement, etc.).

2. Design and execute an art item for the children's ward of a hospital.

Activities: To accomplish these objectives the student may engage in activities such as:

1. High Impact: Design and execute for the children's ward of a local hospital a variety of art items: wall hangings using storybook characters, mythological creatures, wild animals, etc.; mobiles, stabiles; jigsaw puzzles; games; etc.

   a. Arrange the occasion for presentation of these to the children; coordinate with luncheon party activity, Home Economics--Food Preparation section of this unit.
   b. Consider incorporating "Sesame Street" kinds of educational activities in the art items (e.g. wall hanging depicting the numerals 1 through 10, etc.).

2. Research art-related occupational opportunities in the hospital setting. Each student should prepare an oral/written report on some aspect of art as an occupational opportunity.

3. Field trip: Observe art at work in the hospital. Discuss additional ways you find that art could be used in that hospital.

Materials:

1. burlap
2. scraps of cloth
6. coat hangers
7. construction paper

Materials -- Continued

3. yarn
4. wood scraps (at least 5x6 inches)
5. needle (large eye)
8. black thread
9. glue
10. India ink
11. poster board

BUSINESS

Purpose: To explore the occupational opportunities in hospitals that require knowledge of and skill in business procedures.

To broaden the students' concepts of hospital services, including particularly the financial aspects.

Objections: Upon completion of work in this unit the student should be able to:

1. List occupational opportunities in hospitals for which business education skills are important and to describe one such occupation (title, responsibilities and duties, entry requirements, salary and advancement, etc.).

2. Describe generally the flow of information/data into and out of the hospital administrative offices and to describe one particular aspect in detail (e. g., how medicines used by a patient get charged on that patient's bill).

3. Describe the general financial aspects of hospitals (i.e., sources of funds) and to compare and contrast, in this regard, private, city, country, and federal hospitals.

Activities: To accomplish these objectives the student may engage in activities such as:

1. High Impact: Assume responsibility for the administrative part of the simulated Minischool Hospital activity (See Social Studies).

2. Field trips: Have different groups of students visit the administrative offices of different hospitals and prepare written reports of each. A summary comparing and contrasting the different sites visited should then be typed.

3. Resource person: Hospital administrator to describe financial aspects of hospitals and details of administrative services. Prepare flow diagram depicting hospital administration from answers received to prepared questions.

4. Prepare displays, based on the preceding activities, to show the financial aspects of hospitals and de-

Activities -- Continued

tails of administrative procedures (as called for by Objective 2).

Materials:

1. Information sources about hospital finances and administrative services.

HOME ECONOMICS

Purpose: To make students aware of the occupational opportunities that exist in hospital services; specifically, those related to home economics in Washington, D.C. metropolitan area.

Opportunities for food service workers are excellent, especially dietitians. There is a continuing shortage of hospital dietitians and food service workers in general. New and expanded hospital facilities and more widespread use of hospital and medical services by our growing population have resulted in the need for many more hospital food service workers. In addition, there is a growing understanding of the importance of nutrition in promoting good health from infancy through the mature years of life.

This unit has two parts, the second of which extends the coverage to actual food preparation: planning, preparation, and service.

Objectives: Upon completion of work in this unit the student should be able to:

1. Describe the food services personnel in the hospital.
2. List occupational opportunities for food service workers elsewhere than in hospitals.
3. Use technical terminology as it relates to this field of occupation.
4. Describe how provision of quality food services depends upon careful, concerned coordination of all personnel at different occupational levels.
5. List the educational requirements for food service jobs: apprenticeship, on-the-job training, college and degree requirements.
6. Describe the working conditions in food service jobs: the advantages and disadvantages.

Activities: To accomplish these objectives the student may engage in activities such as:

1. View a film or film strip showing supportive agencies

Activities -- Continued

in the hospital. Develop a list of these, noting those that are directly or indirectly associated with food services.

2. Field trip: Macke Vending Co., Lanham, Md. to observe first hand operations of various food service workers from wrappers to manager or supervisor. Tie-In with Industrial Arts to prepare display or model of vending machine.

3. Hands-on experience. Simulated food production line. Assume the roles of workers in the production of a food item (sandwiches) from beginning (cutting board) to end (wrapping) as followup to Activity 2. Tie-In with Mathematics to measure time, number of people to produce a certain amount of goods. Tie-In with Graphic Art to draw a flow diagram of the process.

4. Teacher-led presentation of technical terms: apprenticeship, skilled, unskilled, professional, para-professional, internship, white collar worker, blue collar worker. Write a comparative summary of the technical terms. Tie-In with Social Studies to discuss status and pay of various occupations.

5. Search the library for books, periodicals, and pamphlets related to food service careers. Write reports based on information found.

6. Write to government and private agencies to inquire about occupational opportunities for women. A key information source is:

   Mrs. Elizabeth Koontz, Director
   Women's Bureau, Labor Department
   14th Street and Constitution Avenue

   Tie-In with Language Arts.

7. In groups find out the educational requirements for food service personnel as outlined in the Occupational Outlook Handbook, 1970, and others; see Materials. List these for different types of personnel.

8. Teacher-led discussion of the interdependence of food service personnel at various occupational

Activities -- Continued

levels to ensure delivery of quality food services. List main reasons discussed.

9. Prepare a chart contrasting working hours, pay, benefits, and amount of education required for two types of workers.

Materials:

1. Books:
   a. Hapstetter, Helen, P. For You--A Career in Home Economics. American Home Economics Association.
   b. Institute for Research, Chicago. Dietetics as a areer. The Institute.
   c. Smedley, Daree, and Ginn, Ann. Your Career as a Food Specialist. Dutton Publishing Co.
2. Fiction:
   Eells, May Worthington. Sally Series. Dodd Mead Publishing Company.
3. Booklets:
   a. Hospital Careers: a Guide to Educational and Training Programs in the National Capital Area. Published by the Metropolitan Washington Regional Medical Program, 1812 K Street, N.W., Washington, D.C., 20006 (293-2555).
   b. Family Dinner Service Specialists: a Suggested Training Program. Published by the U.S. Dept. of Health, Education, and Welfare, Office of Education.
4. Other information sources:
   a. Occupational Outlook Handbook, 1959 Edition Bulletin No. 1255
   b. U.S. Dept. of Labor
      1) Bureau of Employment Security
      2) Women's Bureau
      3) Bureau of Apprenticeship and Training
      4) Bureau of Labor Standards
   c. The American Dietetic Association
      620 North Michigan Avenue, Chicago, Ill. 60011
   d. U.S. Civil Service Commission
      Washington, D.C. 20025
   e. American Home Economics Association
      1600 12th Street, N.W., Washington, D.C. 20009
   f. Institute of Food Technologists
      221 N. LaSalle St., Chicago, Ill. 60601

HOME ECONOMICS--Food Preparation

Purpose: To expand the students' knowledge and ability in planning, preparing, and serving healthier meals to get the most for the family's food dollar.

Learning to cook is fun, as well as very useful. This can be true for both young men and young women. With patience and practice, teenagers can prepare foods that look and taste good. Many young people already prepare or help to prepare some of the family's food. However, there are many different recipes and ways to prepare foods and there is always something new to learn about foods.

Objectives: Upon completion of work in this unit the student should be able to:

1. Discuss that planning, preparing and serving foods can be advantageous to both men and women, now as teenagers and later as adults.

2. Demonstrate that pre-planning is economical in food preparation.

3. Prepare and serve a nutritious meal using Basic 4 as a guide.

4. Describe various cookery principles and techniques for different food groups.

5. Evaluate finished food products according to a set of criteria.

6. Identify an attractive table and discuss how acceptable service adds to the pleasure of a meal.

Activities: To accomplish these objectives the student may engage in activities such as:

1. High Impact. Give a luncheon party for the children's ward of a hospital, or for some comparable group. Plan, prepare, and serve the meal. Have young men and women share equably in all aspects. If sandwiches are used, tie-in with Activity 3 from the preceding Home Economics section.

2. Open discussion. Advantages of knowing how to plan, prepare, and serve meals when a teenager and later

Activities -- Continued

as an adult. Emphasize conditions under which men might have to or should be expected to plan, prepare and serve meals. Write a list of those advantages from which you as an individual may benefit.

3. View filmstrip. "Your Money's Worth in Shopping" (Household Finance Co.). Write any changes you would make in shopping habits as a result of the film.

4. Administer pre-test to assess students' competence to:

   a. Read and interpret a recipe.
   b. Identify cooking tools and equipment.
   c. Understand measurements and abbreviations used in recipes.
   d. Employ certain cooking techniques designated by the teacher.

5. Teacher review of menu planning from 7th grade coverage.

6. Plan a luncheon menu using Basic 4 as their guide; include a recipe for each food chosen.

7. Hands-on experience. Menus from Activity 6 to be used: each student or student team prepare and serve their menus.

8. Use newspaper food sections (and/or information from local food stores) to calculate the actual cost of the meals (Activity 6,7), considering the number of persons in the family and amount of money to be spent. Tie-In with Mathematics.

9. Teacher-student planning of market orders of foods for the menus (Activity 6, 7, 8).

   a. Inventory foods on hand.
   b. Revise list of needed purchases accordingly.

10. Field trip:

    a. Large supermarket, neighborhood food shop to compare prices of items on market order (Activ-

Activities -- Continued

ity 9); report the results to the class.
b. Purchase the items needed (Activity 9, 10).

11. Simulated laboratory to familiarize students with the layout of the laboratory, storage of tools and equipment, storage of foods; walk-through of jobs for each kitchen unit.

12. Hands-on experience. See Activity 7. Culmination of Activities 6-12.

    a. Maitre d'/hostess to arrange centerpiece, menu.
    b. Waiter/waitress to set the table.
    c. Assistant cook to prepare bread, dessert, beverage.
    d. Cook to prepare the main dish and vegetable or salad.
    e. Bus boy/girl to perform support duties as in a restaurant.

13. Evaluation of the laboratory experience:

    a. Evaluation of the products made by cook and assistant cook; see attached checklist.
    b. Evaluation of student performances; use a rating form developed by the students. Tie-In with Social Studies.

14. Prepare an oral/written report describing a food service occupation: title, responsibilities and duties, entry requirements, salary and advancement, etc.

Materials:

1. Checklist: attached.
2. Texts:
    a. Lewis, Banks, et al. Tomorrow's Home Maker. Macmillan, New York.
    b. Cross, Alsene. Introductory Homemaking. J.B. Lippincott, New York.
    c. Pallard, Lula B. Experience with Foods. Ginn & Co., Boston.
3. Films, Film Strips
    a. "The World of Wonderful Foods" (Free from Proctor and Gamble)
    b. "Bread Series" ($5 from Betty Crocker Dept., General Mills, Inc., 9200 Wayzata Blvd., Minneapolis, Minn.)

Materials -- Continued

c. "Planning Meals for Nutrition" (McGraw-Hill Co.)
d. "Mealtime Can Be Magic" (3M Corp.)

4. Booklets:
   a. "Festive Foods" (Washington Gas Light Co.)
   b. Betty Crocker Cookbook (McGraw-Hill Book Co., New York)
   c. Better Homes and Gardens Junior Cookbook (Meredith Publishing Co., Des Moines, Iowa)

RATING SHEET

QUESTIONS		ANSWERS	
1.	Am I clean and prepared to work?	[]YES	[]NO
2.	Have I assembled all ingredients and utensils?	[]YES	[]NO
3.	Am I familiar with the procedures to be used?	[]YES	[]NO
4.	Am I sure that I am following the right procedures?	[]YES	[]NO
5.	Am I following good standards in cooking and housekeeping?	[]YES	[]NO
6.	Was my product or work finished on time?	[]YES	[]NO
7.	Did I use my time wisely?	[]YES	[]NO
8.	Did I do my duties as assigned?	[]YES	[]NO
9.	Was the unit left in order?	[]YES	[]NO

10. How would I rate my product?

[] GOOD [] FAIR [] POOR

Why?

11. How would I rate my performance?

[] GOOD [] FAIR []POOR

Why?

CLUSTER 2 - Grade 8

HEALTH OCCUPATIONS

Unit/Topic 2 - Preventive Medicine

ERIC

Topic. Preventive Medicine

Purpose: To explore occupations involved in preventive medicine.

To point out the necessity for immunizations:

1. typhoid
2. smallpox
3. scarlet fever
4. whooping cough
5. diphtheria
6. poliomyelitis
7. sleeping sickness
8. Vincent's infection (trench mouth)
9. tuberculosis
10. syphilis
11. gonorrhea
12. fumigation and disinfection
13. general control measures

To help youth avoid four great dangers: drinking, smoking, venereal disease and narcotics addiction.

To make students aware of the many preventive services available in the community: mobile units for X-rays, diabetes and other physical examinations for persons 40 years old and above, and periodic dental, visual and hearing examinations in the public schools.

Main Ideas:

1. Many illnesses are preventable through periodic physical examinations.
2. Treatment for youth and adults suffering from social diseases is readily available.
3. Preventive services are available in one's own community and are, for the most part, free or relatively inexpensive.

Quests:

1. Debate the following question: "Is Smoking a Necessary Human Vice?"
2. Draw a cartoon series indicating several reasons why people smoke.
3. Hold a panel discussion on "Society's Attack on Alcoholism."
4. Do a scrapbook on communicable diseases and the scientists who discovered vaccines against them.

Career Opportunities:

1. Semi-Skilled

   Nurse's aide, physical medicine aide

2. Skilled

Career Opportunities -- Continued

Dental assistant, dental lab. technician, insurance underwriter, licensed practical nurse, radio and television announcer

3. Professional

Advertising manager, athletic trainer, biologist, Boys' Club executive director, Boys' Club program director, Catholic priest, child care supervisor, dentist, dietician, general insurance agent, home demonstration agent, insurance safety engineer, microbiologist, nurse-head, nursing director, optometrist, osteopathic physician, physical ed. teacher, physical therapist, physician, podiatrist, protestant minister, psychiatric social worker, psychologist, purchasing agent, recreation therapy leader, social worker, speech and hearing therapist, staff nurse, teacher-college, teacher-elementary school, teacher-kindergarten, teacher-secondary school, YWCA program director

LANGUAGE ARTS

Purpose: To learn about and explore career opportunities in preventive medicine.

Objectives: Upon completion of work in this unit the student should be able to:

1. List specific occupations in preventive medicine.

2. State the value of immunization in checking communicable diseases and cite at least one example.

3. List and describe briefly one or more dangers associated with each of the following: drinking, smoking, VD, drugs.

4. Abstract print and nonprint material.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Research a particular topic in preventive medicine and prepare an oral/written report. Topics can include specific diseases and their immunization, vaccines and their discoverers, specific medical/dental conditions for which regular checkups are recommended and means by which these conditions are checked, etc. Tie-in with Social Studies.

2. Prepare, in conjunction with Activity 1, a bibliography with each entry accompanied by an abstract.

3. Write a letter to an agency such as National Institutes of Health for information on a specific topic associated with Activity 1.

4. View films (See list under Materials) and make a filmography of them containing an annotation for each film.

5. Make a booklet, Research Review, in which the students enter abstracts of print and

Activities -- Continued

non-print material encountered in this unit, particularly Activity 1. This booklet might be a group project containing entries from the students based on the other activities (1,2,4).

6. Make a lexicon of terms for this unit; find word origins for the names of diseases studied; enter in the Research Reviews handbook, perhaps as a glossary subsection.

Materials:

1. Films:
   a. "Immunization" (U. of Iowa)
   b. "Career: Medical Technologist" (U. of Iowa)
   c. "In a Medical Laboratory" (U. of Iowa)
   d. "Health Heroes: The Battle Against Disease"

MATHEMATICS

Purpose: To understand the activities carried on in the various branches of medical science to promote good health, lessen the incidence of disease, and prolong life, with particular attention to the role of arithmetic computation.

Objectives: Upon completion of work in this unit the student should be able to:

1. Make charts to show results of calculations that involve researched data.

2. Estimate future trends from research data.

3. Solve verbal problems requiring any of the four fundamental operations with whole numbers.

4. Calculate averages from research data.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Determine the number of VD cases occurring in three U. S. ities during the period 1965, 1966, 1967. Tie-In with Social Studies--research skills. Calculate both the total and the average per city for each year and the overall three-year period. Then have them draw charts showing the results of their calculations and use these to predict by pattern recognition <u>future trends</u>.

2. Determine for a three-year period the number of respiratory patients within their community for whom smoking is attributed as a cause. Calculate the average number of such cases per year. Plot the results on charts and use the charts to predict future trends.

3. Calculate the number of individuals thought to have VD for the years 1968, 1969, 1970. Have them calculate the average number per year. Compare this with number of cases reported.

Activities -- Continued

4. Make a chart showing the number of cases of VD per thousand for the years 1965, 1966, 1967, 1968, 1969, and 1970. Draw a line through the average number of cases for the years used to project the future trend. Calculate the average number on a per thousand case basis.

Materials:

1. Graph paper
2. Information on venereal disease and access to information on it, and respiratory diseases in relation to smoking for the local community

SCIENCE

Purpose: To explore representative causative microorganisms often associated with infection and how these can be handled in relative safety.

Students can understand diseases better if they grow some microorganisms taken from common sources. Collection and identification of microorganisms is a necessary step in understanding the cause spread, treatment, cure, and prevention of disease.

Objectives: Upon completion of work in this unit the student should be able to:

1. Make bacterial cultures from common places and objects (wall of room, pencil, etc.).

2. Sterilize containers to kill most microorganisms with heat and steam.

3. Describe various natural and artificial body defenses against disease.

4. Describe the careful research that went into the development of a recent vaccine (e.g., Salk).

Activities: To accomplish these objectives the student may engage in activities such as:

1. Teacher-led discussion of the kinds of "shots" the students have had and that the baby in the family or neighborhood has had, including the purpose, the dispensing agent or agency, and the effect of the inoculation.

2. Read about communicable diseases for which there are vaccines. Oral/written reports are to be given by the end of the unit. Tie-in with Language Arts, Social Studies.

3. Teacher discussion of the basic types of organisms that cause disease: bacterium, virus, and fungus. Have the students draw and label structures and types.

Activities -- Continued

4. Teacher demonstration. Prepare a simple agar culture medium and pour into sterilized petri dishes. Make a checklist for maintaining antiseptic conditions.

5. Obtain samples of microorganisms form various articles and places: hair, comb, pencil, room dust, hall railing, lunchroom table, lavoratory, etc. (Encourage the students to use their imaginations).

6. Teacher-led discussion of ideas for suitable environments for the growth (incubation) of these organisms (warmth, indirect light, food, oxygen). Write a summary of the effect of the absence of one of these factors.

7. Incubate culture dishes for several successive days until there is no more growth. Observe daily with petri dish closed and record via written notes and drawings (even color photographs, if feasible) the changes in the growth of the colonies. Written notes should reflect characteristics of shape, texture, and sheen. See a bacteriology lab. manual for morphology of colonies.

8. Teacher demonstration of making a smear from one of the cultures fo show staphlococcus aureus or other relatively harmless bacteria. Report on the observation of the bacterium under the oil immersion lens of a microscope (the biology teacher can be helpful here).

9. Collect pictures of various bacteria from magazines and old biology supply catalogs and prepare notebooks, scrapbooks, displays.

10. Teacher demonstration of the method of steam sterilization using a pressure cooker or autoclave for destroying safely the petri dish cultures. A team of students may do this for all cultures.

11. Culminating Activity. To bring together the reading and report assignments from Activity 2, teacher lead discussion of natural

Activities -- Continued

and artificial body defenses against disease and develop a list of these. Develop the idea of protection by vaccines from any deadly or crippling diseases.

a. Have students give the oral/written reports that they have prepared from their reading assignments. As feasible, record these on tape recorders for later "feedback" and review of individual presentations. Tie-in with Language Arts.

12. Quests:

a. Prepare displays of various vaccines based on the discussion in Activity 1. Tie-in with Social Studies, Art.
b. Prepare a report on why it would be significant to demonstrate a virus as a cause of cancer.

13. Teacher discussion of the history of the fight against poliomyelitis (polio; infantile paralysis) culminating in the development of the Salk Vaccine. Prepare a chronological account of the history of the Salk vaccine.

14. Teacher-led discussion. List communicable diseases for which there is no vaccine. By what means can the students be protected from them?

gonorrhea	Vincent's infection (trench mouth)
syphilis	impetigo
common cold	ring worm
tuberculosis	athlete's foot
malaria	

Materials:

1. petri dishes
2. agar nutrient medium
3. pressure cooker or autoclave
4. scotch tape
5. gas stove or two burner hot plate
6. wax marking pencils

Materials -- Continued

7. Films:
   a. No. 664, "Interruption To Life," (S-A) 14 min., color, 1953. Good on the scourge of Poliomyelitus.
   b. NR. 1044, "Microorganisms: Harmful Activities, (S) 15 min., color, 1958. Production of enzymes and toxic wastes.
   c. No. 1004, "Bacteria, Laboratory Study," (S) 15 min., 1958.
   d. No. 1152, "Innocent Party," (S) 15 min., color, 1959. A teenager contracts VD and transmits it to his girl friend.
   e. No. 1214, "Anatomy of a Disease," (S-A) 15 min., color, 1962. The nature of tuberculosis and the skin test for it.
   f. No. 1226, "Fungi," (S) 16 min., 1961. In foods and in diseases.
   g. No. 1572, "Your Protection Against Disease," (P-I) 8 min., color. Simple concepts. Use with a slow group. A knowledge of human physiology leads to good health habits.
8. Film Strips:
   a. No. 466, "Edw. Jenner and the Story of Smallpox" (I-S). 73 frames. 1948. Biographical material and the development of smallpox vaccine.
   b. No. 76, "Body Defenses Against Disease" (S) 70 frames. 1958. Shows protective action of skin and muccous membranes, lymphatic system, and circulatory system.
9. Books:
   a. DeKruif, Paul H. Microbe Hunters, Harcourt, 1926.
   b. Sullivan, Navin. Pioneer Germ Fighters, Atheneum, 1962.
   c. Kenny, Elizabeth. And They Shall Walk, The Life Story of Sister Elizabeth Kenny, Dodd, Mead, 1943.
   d. King, Ambrose J. and Nicol, Claude. Venereal Diseases, London, Cassell, 1964.
   e. Lerner, Marguerite R. Michael Gets The Measles. Medical Books for Children, 1959.
10. Textbooks:
   a. Otto and Fowle. Modern Biology. Holt, Rinehart, & Winston, 1965. pp. 6-8 gives a historical approach to the development and testing of the Salk vaccine.

Materials -- Continued

b. Davis, Burnett, et. al. Science 2: Experiment and Discovery, Holt, Rinehart & Winston. 1965. Unit II pp. 352-385 on "Diseases and Their Prevention."

ERIC

Career Development Curriculum Guide: Grade 8
Health Occupations, Preventive Medicine

SOCIAL STUDIES

Purpose: To explore the socioeconomic implications of preventive medicine and occupational opportunities associated with preventive medicine programs.

From the individual's viewpoint, preventive medicine offers the advantage of early detection of medical problems and possible the decreased likelihood of their occurring. These are personal benefits for which we might expect the individual to pay.

From society's viewpoint, preventive medicine offers the advantage of reducing the socioeconomic cost to the community of medical problems through early detection or decreased likelihood of occurrence of illness and disease; for example, absenteeism, lessened productivity, chronic impairments, unnecessary deaths, and so on.

The focus of this unit is on the socioeconomic costs of medical problems and the role of preventive medicine in reducing them.

Objectives: Upon completion of work in this unit the student should be able to:

1. List various socioeconomic costs resulting from medical problems.

2. List medical problems which cause significant socioeconomic costs today and describe for one of these the status of preventive medicine. Tie-in with Science.

3. List medical problems which have been "conquered", in the main, by effective preventive medicine; and describe for one such problem the main means for its prevention, as well as the person(s) responsible for discovering the means for prevention.

4. Describe, in relation to 4., one current preventive medicine program; specifically, the general nature of the program, its occcpational opportunities, and at least one such occupation

Objectives -- Continued

(title, responsibilities and duties, entry requirements, salary and advancement, etc.).

Activities: To accomplish these objectives the student may engage in activities such as:

1. High Impact: Plan and conduct a survey of the Minischool students with respect to preventive medicine programs to which they have been exposed and preventive medicine activities in which they may be engaged (e.g., regular medical/dental checkups). Prepare a Minischool report of the results:

   a. A poster showing each preventive medicine program covered by the survey, with explanatory notes and a listing of the occupations involved. Tie-in with Art.
   b. A printed brochure showing the data in graphic and tabular form for distribution to the Minischool students and parents. Tie-in with Mathematics, Language Arts, Industrial Arts.

2. Open discussion: Socioeconomic cost of medical problems and their impact on the local community. Develop for the discussion a list of socioeconomic costs, a list of medical problems causing such costs to substantial degrees, and a list of preventive medicine programs or activities for these problems.

   a. Teams of students responsible for design execution of displays of the above, including whatever supportive research is necessary; that is, a display showing for a particular medical problem its socioeconomic costs and existing preventive programs, if any.
   b. Coordinate this with Activity 1.a. Tie-in with Business-data on productivity losses.

3. Resource persons:

Activities -- Continued

a. Speaker from U. S. Public Health Service on preventive medicine programs developed and/or supported by it. List and describe the programs covered.
b. Speaker from the American Medical Association or other group on the role of public education and information programs in ensuring effective preventive medicine. Compare the information discussed with programs already familiar to the students.

4. Prepare an oral/written report on an occupation within preventive medicine (See Objective 4). Tie-in with Language Arts.

5. Quests:

a. View a film involving preventive medicine (e.g., "Panic in the Streets", "Arrowsmith") and prepare a review.
b. Prepare an oral/written report on a pioneer in preventive medicine.
c. Organize a panel discussion on the "Arrowsmith" problem.
d. Organize a panel discussion on programs for preventing medical problems associated with drugs.

Materials:

1. Information sources on preventive medicine.

HOME ECONOMICS

Purpose: To make the students aware of methods and agencies available for prevention of illnesses and associated occupational opportunities.

Many teenagers are reluctant about reporting illnesses or seeking treatment when needed; many are unaware of the importance of regular medical and dental checkups.

Objectives: Upon completion of work in this unit the student should be able to:

1. Demonstrate awareness of what is available in preventive medicine; specifically to list and describe briefly:

   a. Acquired immunity
   b. Vaccinations (immunization)
   c. Quarantine
   d. Periodic checkups:
      1) Medical
         a) Urine testing
         b) Blood testing
         c) X-rays (chest)
         d) EKG
      2) Dental
         a) Inspection
         b) X-rays
   e. Disinfectants, germicides
   f. Continuous personal health measures
      1) Keeping clean
      2) Brushing teeth, massaging gums
      3) Weight determinations
      4) Care of cuts, injuries

2. Demonstrate awareness of ways for controlling illnesses/diseases that are common among teenagers; specifically, to

   a. List such illnesses/diseases, including main symptoms.
   b. Describe for one such illness/disease current means for controlling it.

3. List proper sources for treatment of specific illnesses.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Teacher-led discussion of the importance of preventive medicine and introduction to basic concepts (See Objective 1). Write summary of basic concepts. Have students trade summaries to check for completeness.

2. Design and execute displays in teams for each of the preventive medicine concepts introduced in Activity 1 (See Objective 1). Tie-in with Art.

3. Resource person: Nurse consultant to discuss in-the-home implications and applications of Activity 1, 2. Contrast these applications with others not available in the home.

4. Read text assignments, select specific topics, and prepare oral/written reports. Tie-in with Language Arts.

5. High Impact. Plan a preventive medicine program for the Minischool on illnesses/diseases common to teenagers and means for their control. The program could include skits, posters, simulated radio and/or TV documentaries and commercials, etc. Various student teams should be assigned responsibility for:

6. a. Developing a list, based on research, of the more common teenage illnesses and diseases.
   b. Obtaining data on their relative frequency particularly within the Washington, D. C. metropolitan area. Tie-in with Social Studies.
   c. Calculating expected frequencies for the Minischool and total school populations. Tie-in with Mathematics.
   d. Obtaining information of how these illnesses and diseases are controlled, as well as their <u>symptoms</u> and <u>treatment</u>.
   e. Documenting misleading information about these medical problems; e. g., in commercials advertising treatment, folklore "myths" about them, etc.

   Tie-in with Language Arts, Science.

Activities -- Continued

7. View the film, "Health, You and Your Helpers". Followup with group discussion.

8. Prepare a brochure listing sources of medical and dental help: name of agency, address and phone, type of services offered, persons served, etc.

   a. Have the brochure printed and distributed. Tie-in with Language Arts, Industrial Arts, Social Studies.

9. Debates:

   a. Private versus public financing of medical services; have outside resource persons as "reactors" or judges.
   b. Centralized versus decentralized medical services; have outside resource persons as "reactors" or judges.
   c. Following each debate write a brief summary of your opinion.

   Tie-in with Language Arts, Social Studies

Materials:

1. Books;
   a. Bauer, Health for All books.
   b. Vermes, Hal and Jean, Helping Youth Avoid Four Great Dangers (Call No. 613/Y).
2. Film: "Health, You and Your Helpers" (Audio-visual Media, D.C., #1588).

INDUSTRIAL ARTS

Purpose: To acquaint students with some of the methods used to prevent accidents in the industrial arts shop.

To explore the safety measures used in industry to prevent shop accidents and occupational opportunities associated with industrial safety.

Objectives: Upon completion of work in this unit the student should be able to:

1. Describe safety measures used to prevent industrial accidents and explain why each is important.

2. To state the safety regulations required by law governing industrial arts in the D. C. public schools.

3. Demonstrate the proper safety procedures in operating shop machinery, including "Do not touch any machine until instructed to do so".

4. List career opportunities in the area of industrial arts accident prevention and describe one (title, responsiblilities, entry requirements, salary and advancement, etc.)

Activities: To accomplish these objectives the student may engage in activities such as:

1. View film, "Safety in the School Shop", followed by open discussion of implications for their school shop.

2. Field trip: Tour of an industrial plant (Pepsi Cola). Take notes on safety precautions observed or absent.

3. Resource persons:

   a. Municipal officer or union representative to discuss laws, regulations, rules, and other aspects of industrial safety. Make a list of laws that apply to the shop. Tie-in with Social Studies.

Activities -- Continued

4. b. Personnel officer from a large corporation to describe career opportunities in the industrial safety field; or a representative of a firm specializing in this area (e.g., an industrial safety consulting firm). Write a job description of one occupation discussed.
   c. Rap session with Safety Director of the D. C. public schools and/or a safety inspector from an industrial insurance company. Prepare questions on major problem areas.

4. Write the school shop rules and safety procedures in the shop notebook. Tie-in with Language Arts. Tie-in with Mathematics to prepare graphs showing school accident data, percentage that occurred in the shop.

5. Prepare an oral/written report on a career occupation in the area of industrial safety. Tie-in with Language Arts.

6. Carry out newspaper, magazine research on industrial accidents/disasters. Make bulletin board display of results.

Materials:

1. Film: "Safety in the School Shop"
2. Film projector.
3. Standard shop safety items: aprons, goggles

CLUSTER 2 - Grade 8

HEALTH OCCUPATIONS

Unit/Topic 3 - Drug Use and Abuse

Topic: Drug Use and Abuse

Purpose: To explore occupations related to constructive use of drugs:

1. Pharmacists
2. Labelers
3. Dispensers
4. Laboratory technicians
5. Laboratory assistants
6. Researchers
7. Scientists
8. Chemists
9. Doctors
10. Psychiatrists
11. Dentists
12. Counselors
13. Paraprofessionals

To broaden concepts of the use of drugs with emphasis upon the positive and negative aspects of drug consumption.

1. Positive
   a. anesthesia (pain killers)
   b. cure
   c. delay of diseases
   d. prevention
2. Negative
   a. "turn on" - heroin, marijuana, LSD, speed
   b. "turn off" - tranquilizers, sleeping pills

Main Ideas: Drugs are necessary to the treatment and/or cure of physical and emotional health problems.

a. History
b. Use
c. Famous names in drug research

Many occupations are involved in creating the drug before it is made available for constructive use by consumers.

a. Farmers
b. Manufacturers
c. Distributors
d. Drug Stores and Pharmacies

Drugs -- Harmful traffic and usage

a. Physical and social (status)
b. Economic
c. Criminal
d. National control of drugs

Quests:

1. Talk with (and report on) a pharmacist regarding old preparations of drugs by pharmacists and the new, whereby most drugs take the forms of pills and capsules.
2. History of drug traffic
3. Constructive use of drugs
4. Destructive use of drugs

Career Opportunities:

1. Semiskilled

pharmacy aide

2. Skilled

chemical technician
customs inspector
laboratory technician
law officer
parole officer
youth counselor

3. Professional

anesthetist
athletic coach
biochemist
chemist
dentist
nurse
pharmacist
physician
psychiatrist
school counselor
social worker
teacher
veterinarian

LANGUAGE ARTS

Purpose: To explore the drug industry and occupational opportunities within it.

To examine the beneficial and harmful effects of drugs.

To sharpen criticality in appraising information and other content of print and nonprint material.

Objectives: Upon completion of work in this unit, the student should be able to:

1. List occupational opportunities within the drug industry and describe one such occupation (title, responsibilities, entry requirements, salary and advancement, etc.).

2. State beneficial and/or harmful effects associated with various drugs.

3. Discuss peer influences on drug taking behavior and means for resisting it.

4. Identify forms of persuasion and distortion in print, nonprint and oral forms of communication.

Activities: To accomplish these objectives, the student may engage in activities such as:

1. View films (see list under Materials); discuss them and do writeups. The discussions and writeups should concentrate on communication techniques, pressures to conform including peer pressure, and means for understanding communication techniques and coping with pressure from peers and elsewhere. Tie-in with Social Studies.

2. Read editorials and essays written by other students (and/or from newspapers) on drugs. Have them analyze the communication techniques used, such as by underlining words they think are intended to evoke emotional effects (the students may benefit from reviewing strong and weak verbs). Tie-in with Social Studies.

Activities -- Continued

3. Research the drug industry and occupational opportunities within it. Reports should take the form of:

   a. Displays listing occupational opportunities.
   b. Oral/written presentations on aspects of the drug industry, drug benefits and dangers, etc.
   c. A handwritten letter to a friend describing a particular occupation in the drug industry.

4. Make a lexicon of words associated with the drug industry and drugs (apothecary, pharmacy, heroin, etc.); give their historical origin and a brief definition.

5. Quest: Prepare displays depicting peer group pressure and ways to resist it and of persuasion techniques in printed communications (e.g., emotionalizing words).

Materials:

1. Films
   a. "LSD-25" (Prince George's County)
   b. "How to Say What You Mean" (U. of Iowa)
   c. "Say What You Mean" (U. of Iowa)
   d. "Communication which Evaluates and Criticizes" (U. of Iowa)
   e. "A Quarter Million Teenagers" (Prince George's County)
   f. "The Riddle" (Prince George's County)

Career Development Curriculum Guide: Grade 8
Health Occupations, Drug Use and Abuse

MATHEMATICS

Purpose: To assist students in becoming aware of the benefits and dangers in the use of drugs, with particular attention to the role of arithmetic computations in assessing use and abuse.

Objectives: Upon completion of work in this unit the student should be able to:

1. Solve verbal problems requiring any of the four fundamental operations with arithmetic numbers and percentages.

2. Use graphic or pictorial means for demonstrating the meaning of percentage.

3. Identify and use the fundamental operations and the properties of whole numbers, percentages, and percents in making calculations.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Calculate the cost of a large quantity of heroin, using arbitrary but realistic data. Identify each fundamental operation performed.

2. Calculate the amount of revenue lost by the Federal Government because of the heroin problem. Use the results in an open discussion on how illegal quantities of (legal/illegal?) drugs might promote an increase in the manufacture of illegal, untaxed drugs.

3. Calculate for a 30-day period the cost of three different drugs, prescribed by doctors, using realistic data on average daily cost. Make a comparison chart to show this information.

4. Calculate the percent of inactive ingredients (e.g., corn syrup, sugar, cornstarch) used in the preparation of 5,000 tablets of aspirin. Make a chart showing the percent of each inactive ingredient used in producing these tablets. Identify each fundamental operation as it is performed.

Activities -- Continued

5. Quest: Determine the prices of various prescription drugs through a survey of local pharmacies. Tie-in with Social Studies. Make a chart of the results.

Materials:

1. Graph paper.
2. Data on drugs and their cost.

Career Development Curriculum Guide: Grade 8
Health Occupations, Drug Use and Abuse

SCIENCE

Purpose: To learn that the work of the pharmacist and the U.S. Food and Drug Administration (FDA)technician involves complex skills based on careful laboratory techniques and procedures and requiring a broad background of training in the sciences.

The drug business is a multi-billion dollar industry in the United States. As an example, there were 80 aspirin tablets manufactured last year for every man, woman, and child in the nation. That's two hundred million dollars alone on aspirin.

Students must become better prepared to make intelligent appraisals of drugs through careful reading of labels, knowing the purpose of labeling and limitations on the information contained, and knowing dangers in the misuse of drugs, whether intentional or not.

Objectives: Upon completion of work in this unit the student should be able to:

1. List drugs usually found in the home medicine cabinet or shelf; state possible dangers associated with their use; and state possible means for reducing these hazards, particularly with respect to young children.

2. Measure liquid and dry volumes and weights according to a prescribed formula.

3. Describe how scientific methods of research are used by the U.S. Food and Drug Administration to determine which drugs are relatively safe and which ones sufficiently hazardous to warrant their being banned or withdrawn from the market.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Study the FDA pamphlet "First Facts About Drugs." Focus on specific developmental reading skills recommended by Language Arts.

Activities -- Continued

a. Prepare a display showing the labeling information requirements of the FDA, as well as one showing the information required by the FDA from the drug manufacturer.

2. Submit a list of the drugs available in their home medicine cabinets or shelves. Divide the items listed into Over-the-Counter (OTC) medicines or drugs and prescription drugs.

   a. Prepare a notebook and list the facts for each drug according to the information required by law as outlined in the FDA pamphlet (See 1a above).

3. Prepare a table of the results of their survey in 2 above to show the frequency with which various items recur. The same can be done for the various chemicals used in the drugs and medicines. Tie-in with Mathematics.

   a. Teacher-led review of individual elements and radicals from 7th grade science unit on matter.

4. Resource persons:
   a. Have a pharmacist talk about his work and the required educational background to become licensed. List the major responsibilities, tasks and courses taken.
   b. Panel discussion. FDA officer, drug firm representative, physician, community representative--discuss the role of the FDA in protecting the public and the problems involved in balancing between effective drugs and medicines for our benefit and the sometimes dangerous side-effects.

5. Laboratory demonstration: Using a simplified version of a high school chemistry laboratory exercise, make a drug like aspirin and test the product for taste and pH. Compare the taste and pH with a commercially "pure" aspirin.

Activities -- Continued

6. Quests: Tie-in with Language Arts, Social Studies.
   a. Research and prepare an oral/written report on the drug thalidomide. How was it tested? How was it used? When was it discovered to be harmful? What prevented its use in the United States?
   b. Research and prepare an oral/written report on the cancer-producing spray used on the cranberry crop before the 1970 Thanksgiving season.
   c. Other possible topics:
      1) Danger of the Shell "no-pest-strip" around foods.
      2) High mercury content in swordfish.
      3) Cyclomates in soft drinks.
      4) Salmonella poisoning.
   d. Oral/written report on the history of the use of morphine from opium and how its addictive nature was discovered. Include transmission of addiction during pregnancy.

Materials:

1. Food and Drug Administration pamphlet, "First Facts About Drugs," FDA Publication No. 21, revised 1970, G.P.O. 15¢ each.
2. Miscellaneous drug and medicine boxes which list ingredients and dosage.
3. Test tubes, mortar and pestle, beakers, scales, graduates, and funnels.
4. FDA "Fact Sheets" and other reference materials.

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SOCIAL STUDIES

Purpose: To explore socioeconomic aspects of drug use and abuse, including the general nature of the pharmaceutical industry and occupational opportunities within it.

Objectives: Upon completion of work in this unit the student should be able to:

1. List and describe briefly some of the historical aspects of the use of drugs (e.g., pain killers, including anesthetics, heart stimulants and depressants; "psychic" drugs, etc.); specifically, state what the problems have been and which drugs have been used for them down through history.

2. State how to distinguish between drug use and drug abuse and illustrate their argument with reference to specific drugs.

3. List one or more drugs having international status (e.g. heroin) and indicate on a world map the major sources.

4. Estimate the extent of drug problem in the U.S. with respect to heroin addiction and to describe briefly how such estimates are usually done by U.S. Public Health Service and other agencies.

5. List major Federal agencies concerned with the control of drugs and to describe each briefly.

6. Estimate the annual gross of the U.S. pharmaceutical industry; to describe briefly the organization of a typical firm; and to list occupational opportunities within such a firm. Additionally, the student will be able to describe one such occupation (title, responsibilities and duties, entry requirements, salary and advancement, etc.).

Activities: To accomplish these objectives the student may engage in activities such as:

Activities -- Continued

1. High Impact: Drug Information Week. Plan and conduct a program of activities to inform the Minischool, larger school, and parents about various aspects of drugs, including:
   a. Design and execution of posters on historical aspects of drug use and abuse.
   b. Preparation of a "mural" display showing the general organization of the American pharmaceutical industry; the gross annual income, the organization of a typical firm, the Federal agencies responsible for regulation.
   c. Preparation of a display showing the international sources of various drugs.
   d. A printed brochure or flyer listing sources of help for drug problems in the Washington, D. C. area.

   Tie-ins with Art, Industrial Arts, Language Arts.

2. High Impact: Prepare and present a play or skit designed to dramatize for the Minischool the kinds of encounters young persons may have with drugs and means for coping with these. Tie-in with Music, Language Arts.

3. Resource persons:
   a. Pharmaceutical firm representative to describe the organization and operations of a drug company. Write a job description of one occupational opportunity discussed.
   b. Representative of a federal agency (FDA) to describe the federal agencies involved with drugs and their regulation. List and describe briefly each agency involved.
   c. Panel discussion: "The problem of drug addiction: can it be solved?" Have participants research various aspects of the problem -- causes, possible cures -- and present their findings. As feasible, have outside resource persons as reactors, such as an ex-addict, a narcotics enforcement officer, a medical person involved in drug addict treatment and rehabilitation, someone knowledgeable about the drug problems of U.S. soldiers in Vietnam. Tie-in with Home Economics with special presentation on recognition of family members of drug use and abuse.

Activities -- Continued

4. Quests: Have a group of students elected to research the matter of:
   a. How agencies estimate the extent of the drug problem. This group should operate through sub-committees who will arrange to meet with representatives of various agencies -- D.C. Police Department, federal agencies -- to determine the means used for estimating the number of drug users, addicts, etc. and the cost of the drug problem with respect to crimes committed to obtain drugs or money for their purchase, etc. Tie-in with Mathematics.
   b. A second elected group should be made responsible for preparing and presenting an illustrated account of the results of the research to the Minischool students.
   c. A third elected group should be responsible for preparing, administering, and scoring an examination to assess how well the Minischool students have learned from the presentation in a.
   d. Open discussion, based on Activity 4 a.b.c.. Implications of the research findings for efforts to determine drug use in the school or local community; that is, factors that might make the usual methods for estimating invalid or unreliable.
   e. Individual/group preparation of oral/written reports on the following topics: (Tie-in with Language Arts)
      1) Arguments for and against the legalization of marijuana.
      2) Use of methadone in the treatment of heroin addiction.
      3) Arguments for and against the British approach of making heroin legally available to addicts under medical auspices to undercut the "profit" aspect of the drug trade.
      4) Informal survey comparing and contrasting attitudes of Minischool students with those of an affluent, predominantly white junior high school toward drugs.

Activities -- Continued

5. Field Trip: Tour of a pharmaceutical firm or of a federal or municipal agency concerned with drugs and their regulation. Write a summary of the visit.

Materials:

1. Information sources about the pharmaceutical industry.
2. Information sources about federal agencies responsible for regulating drugs, e.g., FDA

HOME ECONOMICS

Purpose: To make students aware of the health problems that result from the use of drugs.

Teenagers need to be properly educated about the use of drugs as these constitute very real sources of potential medical problems and accompanying social disruptions.

Objectives: Upon completion of work in this unit the student should be able to:

1. Define and use properly the following terms associated with drugs: addiction, addict, narcotic, depressant, stimulant, withdrawal illness.

2. Describe medical and social problems associated with drugs, and means by which they, as parents, might try to cope with such issues. Also, describe critical symptoms of addiction.

3. List sources of help for drug addiction.

Activities: To accomplish these objectives the student may engage in activities such as:

1. High Impact: Tie-in with Language Arts, Science, Social Studies, Industrial Arts, Art. Design and execute a "Drugs, Alcohol, and Tobacco Compendium" for printing and distribution by the Minischool to the school in general and to the parents and local community.

   a. Starting with pertinent new terms, develop a comprehensive list for inclusion in the Glossary of the Compendium. Tie-in with Language Arts.
   b. Teams of students assigned specific terms for which they are to develop the definitions, using pictorial illustrations as much as possible. Tie-in with Graphic Art.
   c. Open discussions with small groups of students to develop lists of problems likely to be encountered by teenagers and by their parents regarding the use of drugs.

Activities -- Continued

d. Teams of students assigned specific problems from c. for which they will develop "better/poorer" ways of handling to be included in the Compendium, using comic strip and cartoon depictions as much as possible. Tie-in with Art.
e. Print and distribute the Compendium following completion of unit on alcohol and tobacco. Tie-in with Business Education for generating lists of persons, most efficient means for distribution, recording the distributions, etc. Tie-in with Industrial Arts for printing.
f. Prepare feature articles about this activity for submission to local newspapers.

2. Compile a list of places and people from which help may be secured and include in the Compendium; family physician, Hotline, Black Man's Development Center, and so on. Tie-in with Social Studies.

3. Resource persons: Facts about drugs--their use and abuse. Make a summary of facts covered.

4. View the film, "Narcotics, the Inside Story" and discuss points made by film.

5. Post on the bulletin board, prepare displays, and/or give oral/written reports on newspaper and magazine stories about drugs. This may include several school surveys for comparison.

Materials:

1. Publications from the American Home Economics Association, 1600 20th St., NW, Washington, D.C. 20009
   a. Home Economist in Community Programs (0404, $2.50)
   b. Home Economics Careers in Health and Welfare (0002, 25¢)
   c. Understanding and Meeting Problems of Drug Abuse (6918, 25¢)
2. Reference:
   a. Bauer, Health for All, Book 8
   b. Curriculum Resource Bulletin, Health and Family Life Education for the Junior High School, 1964, Washington, D.C.

Materials -- Continued

3. Filmstrip from Catalog of Audio-Visual Materials, D.C. Education Media Center:
   a. "Narcotics, the Inside Story"

Career Development Curriculum Guide: Grade 8
Health Occupations, Drug Use and Abuse

INDUSTRIAL ARTS

Purpose: To promote awareness of the importance of knowledge of the effects of drugs.

Objectives: Upon completion of work in this unit the student should be able to:

1. Demonstrate knowledge of the effects of different drugs with particular attention to implications for industrial arts. These should include heroin-H-, speed, goof balls, marijuana-grass.

2. Use common machines and tools for construction of a show mobile for displaying communications about drugs.

Activities: To accomplish these objectives the student may engage in activities such as:

1. High Impact: Design and build a show mobile for use throughout the rest of the year to display information in the Minischool and the larger school community. Tie-ins with Mathematics for the preparation of a scale drawing, Language Arts and Science for displays.

2. Open discussion: How the use of drugs can affect the industrial arts shop; adverse effects on safety, cleanliness, health; how shop foremen can detect these problems; how shop foremen and other shop personnel might try to deal with these problems. Make a list of symptoms one might look for to detect problems.

3. Displays for show mobile. Assign student teams responsibility for designing and executing displays:

   a. A collage of graphics on the positive and negative aspects of drugs as they affect home, school, and community.
      1) Data on absenteeism, accidents, poor work. Tie-in with Social Studies.
      2) The pharmaceutical industry.
      3) Resources for helping persons experiencing adverse consequences of drugs.

Activities -- Continued

4. Resource persons:
   a. Rap session with ex-addicts to discuss and assist in the design of displays for the show mobile.
   b. Presentation by representative of advertising industry of industrial arts occupational opportunities associated with advertising displays. Write a job description for one of these opportunities.

Materials:

1. Show mobile material:
   a. Lumber
   b. Glass/plastic/plexiglass
   c. Locks
   d. Casters
   e. Aluminum
   f. Metal handles

Notes:

The activities here are to be continued in the next unit to include alcohol and tobacco.

CLUSTER 2 - Grade 8

HEALTH OCCUPATIONS

Unit/Topic 4 - Alcohol and Tobacco

Topic: Alcohol and Tobacco

Purpose: To make students aware of the dangers of alcohol.

To show the widespread harmful causes and resulting effects of excessive use of alcohol (alcoholism) such as:

loneliness	economic hardships
immaturity	poor self-concept
insecurity	poor health
poor family relations	crime

To show the harmful effects of smoking on the lungs.

To show the harmful effects of carbon monoxide in tobacco smoke on animal blood.

To show the harmful effects of tobacco smoke on the respiratory and circulatory system.

To point out possible employment opportunities involving alcohol and tobacco, especially in counseling, guidance, neighborhood workers.

Main Ideas:

1. Alcohol when used properly is necessary to health, but in its excess may also be harmful.
2. Alcoholism is now being regarded as an illness rather than a crime.
3. Tobacco has many adverse effects on human and animal health.
4. The tobacco industry provides many and varied employment opportunities.
5. Resolving the conflict between preventing the adverse effects of tobacco through some form of regulation and the significant role of the tobacco industry in the American economy poses difficult political and socio-economic problems.

Quests:

1. Make a profile of someone suffering from alcoholism.
2. Make a scrapbook showing the harmful effects of tobacco on the human body.
3. Write a 200-word essay on "How Alcoholism Tears Down the Family Structure".

Career Development Curriculum Guide: Grade 8
CLUSTER/MODULE: HEALTH OCCUPATIONS, Alcohol and Tobacco

Career Opportunities:

1. Semi-Skilled

   Laboratory aide

2. Skilled

   Bartender

3. Professional

   Actuary, advertising audio-visual director, advertising manager, advertising media buyer, advertising salesman, agricultural agent, agriculture teacher, agronomist, athletic coach, athletic trainer, buyer, chemist, farmer, osteopathic physician, parole officer, physical therapist, physician, psychologist, public relations worker, restaurant manager, sales correspondent, school counselor

LANGUAGE ARTS

Purpose: To learn about the dangers in alcohol and tobacco.

To learn about alcohol and tobacco industries as business enterprises, with objective consideration of why persons drink and smoke.

Objectives: Upon completion of work in this unit the student should be able to:

1. List and describe briefly possible harmful consequences of alcohol and tobacco.

2. Demonstrate knowledge of the American alcohol and tobacco industries, such as by stating roughly the annual volume of sales and taxes, listing occupational opportunities within them, and describing at least one such occupation.

3. State reasons why people use alcohol and tobacco.

4. Make abstracts and precis of lengthy material, print and non-print concerning alcohol and tobacco use.

5. Define and use satire.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Write to sources listed for this unit to obtain materials on alcohol and smoking.

2. Write abstracts of materials obtained through Activity 1 and other related materials.

3. View films (see listing under Materials) and write precis of them.

4. Prepare a commercial satirizing the use of alcohol and tobacco: newspaper or magazine advertisement, poster, script for radio spot announcement, script plus illustrations as plan for television commercial. Tie-in with Physical Education to examine the effects of smoking and/or drinking on athletic performance. Tie-in with Mathematics to calculate the cost annually for a smoker.

Career Development Curriculum Guide: Grade 8
Health Occupations, Alcohol and Tobacco, LANGUAGE ARTS

Materials:

1. Films:
   a. "Alcohol and the Human Body")
   b. "Alcoholism: The Revolving Door") U. of Iowa
   c. "What About Drinking?")
   d. "Smoke, Anyone?")
   e. "Passion (cigarette addiction)) Prince George's County

2. Smoking and Health. Report of the Advisory Committee to the Surgeon General of the Public Health Service. U.S. Department of Health, Education and Welfare, Public Health Service, January 1964, P.H.S. Publication No. 1103, $1.25.

3. The Health Consequences of Smoking. A Public Health Service Review: 1967. U.S. Department of Health, Education and Welfare, Public Health Service, 1967. P.H.S. Pub. No. 1696.

4. The Health Consequences of Smoking: 1968 Supplement. U.S. Department of Health, Education and Welfare, Public Health Service, 1968. P.H.S. Pub. No. 1696, 1968 Supplement.

5. Agencies having material on smoking and/or alcoholism:
   a. Local Interagency Council on Smoking and Health
   b. Local Health Department
   c. Local branch of American Cancer Society
   d. Local branch of American Heart Association
   e. Local branch of National Tuberculosis Association
   f. National Institute of Mental Health, Bethesda
   g. National Council on Alcoholism
   h. American Medical Association
   i. Institute for the Study of Human Problems, Stanford University
   j. Cooperative Commission on the Study of Alcoholism
   k. Alcoholics Anonymous

MATHEMATICS

Purpose: To make students aware of the problems involved in a study of alcohol and tobacco, including an understanding of the procedures required to use arithmetical computation in solving the problems.

Objectives: Upon completion of work in this unit the student should be able to:

1. Calculate the quantity of an ingredient present given the quantity of the particular substance and percent of the ingredient.

2. Calculate taxes on a particular product given varying tax rates.

3. Calculate averages from survey data.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Using teacher and/or student selected products such as cologne, perfume, antifreeze, formaldehyde, skin lotions, inks, stains, dyes, alcoholic beverages (rums, wines, beers, scotch, bourbon, etc.), find out what percent of alcohol is used to produce each product chosen. (This information may possibly be on many of the labels.) The teacher and/or the students are to find out the total amount or quantity of each product consumed in the U.S. for a day, month, year, etc. On the basis of this, the student is to calculate the amount of alcohol needed for each product chosen, by the various industries that produce the product. Tie-in with Social Studies. Tie-in with Science to learn process of production of alcohol, etc.

   The same calculation may also be done, based on the quantity of sales by the neighborhood stores.

2. Calculate the amount of alcohol present in the quantity as it is sold in the store.

3. Make a survey of the number of tons of tobacco grown in any three states for the years 1967, 1968, and 1969. Calculate the amount of tax dollars

Activities -- Continued

paid by the consumer during the stated periods within the selected states. Tie-in with Social Studies.

4. Make a survey to determine the amount of tobacco grown in mainland China, Turkey, and the United States during the years 1967, 1968, and 1969. Calculate the average amounts grown in each country during this period; make a chart of the averages obtained. Tie-in with Social Studies.

5. Research and determine the various percentages of harmful (or non-harmful) elements in cigarette smoke.

Materials:

1. Charts, graph paper
2. Overhead projector, color crayon
3. World Book (T-18)
4. Research Associates-FORTUNE Magazine
5. U.S. Chamber of Commerce pamphlets
6. Bureau of Labor Statistics reports

Career Development Curriculum Guide: Grade 8
Health Occupations, Alcohol and Tobacco

SCIENCE

Purpose: To enable students to make intelligent choices for themselves based on well-documented examination of issues associated with the use of alcohol and tobacco.

Knowledge of facts gathered scientifically about the short-term and long-term effects of these two common drugs may clear up any misconceptions the students have.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Discuss facts and information from the Surgeon General's Report on Smoking.

2. Describe the antiquity of the use of alcoholic beverages and how fermentation takes place.

3. List some adverse effects of alcohol on the central nervous system.

4. Describe how the police determine the degree of intoxication of a motorist at or after the scene of an accident.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Determine through discussion the students' background of information on the use of alcohol and tobacco, with emphasis on developing a list of statements expressing their present knowledge and understanding as a start toward trying to determine whether the statements should be classified "true," "false," "veracity undecided."

   a. Teams of students select topics in relation to the list above and research the issues involved; make sure that alcohol and tobacco receive equitable coverage.

   b. Each team prepare an illustrated, documented presentation for the Minischool. Those dealing with smoking should rely on the Surgeon General's report; those dealing with alcohol on various information sources.

Activities -- Continued

2. Teacher demonstration. Design a simple cigarette smoking machine and collect tars in a filter from four or five cigarettes. Weigh the filters before and after. Calculate the percent by weight of tars from the cigarettes. Tie-in with Mathematics, Industrial Arts.

3. Teacher discussion of the use of wine and other drinks in ancient literature from various cultures. Tie-in with Language Arts, Social Studies--research skills and the use of literature for historical analysis. Use the Bible and books about cultural anthropology.

4. Teacher demonstration of fermentation, distillation of ethanol with student participation:

   a. Ferment some raisins and unsulfured molasses with yeast in a flask for two days.
   b. Distill the mixture with temperature control to obtain ethanol.
   c. Use the flame test to demonstrate that it is alcohol, not water.

5. Teacher description of the chemical changes in fermentation and the physical changes in distilling. The students should be able to explain the processes. Pupils draw and label the apparatus. List physical changes in the liquid.

6. Lab Experiment: Take a portion of the distilled alcohol and give it to thirsty mice trained to run a maze through their water bottle. Is there change in their behavior? Report the results to the class in terms of time and performance before and after drinking. Tie-in with Mathematics.

7. Resource Person: Have a member of the Metropolitan Police Department Accident Investigation Division demonstrate the devices for detecting the degree of intoxication of a suspected drunken driver and explain the penalties for driving while under the influence of alcohol or drugs. Write a summary of one method.

Activities -- Continued

8. Gather local and national statistics for last year on the number of auto accidents attributed to drunken driving from the National Safety Council. Compare the figures for D. C., Maryland, and Virginia and the national scene. Compare with the number of battle casualties from Vietnam. Tie-in with Mathematics, Social Studies.

Materials:

1. Copies of the Report on Smoking and Health of the Advisory Committee to the Surgeon General.
2. Source books on alcoholism
3. Flasks, rubber tubing, aspirator, glass tubing, micro-weighing, scale, filter paper, yeast raisins, molasses (unsulfured), thermometer, condenser
4. Accident data from National Safety Council, 425 N. Michigan Avenue, Chicago, Illinois 60511.

Career Development Curriculum Guide: Grade 8
Health Occupations, Alcohol and Tobacco

SOCIAL STUDIES

Purpose: To describe supplementary activities for the work begun in the unit on Drug Use and Abuse.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Give examples of negative physiological and psychological effects of both alcohol and tobacco.

2. State why prohibition was repealed.

3. List three factors (ethnic, socioeconomic, sexual) that seem to be related to the possibility of alcoholism.

4. State the approximate number of alcoholics in the United States today.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Alcohol. Individual/group preparation of oral/written reports.

   a. How many alcoholics are there in the U.S. today and by what means is this estimate made?
   b. How does the rate of alcoholism vary in relation to ethnic, racial, socioeconomic, and sex as factors?
   c. What are the main physiological effects of alcohol? Psychological? How are the latter determined or measured?
   d. Book review on some aspect of prohibition; or a film review.
   e. Why was prohibition repealed?
   f. What do we know about the relationship between alcohol and automobile accidents?
   g. Profile of an alcoholic; or review of a book or film depicting an alcoholic.

2. Tobacco. Individual/group preparation of oral/written reports.

   a. Current research programs on the medical consequences of smoking: pick a particular one

Activities -- Continued

to describe, such as experiments teaching animals to smoke.

b. Current programs of the American Cancer Society to get people to quit smoking or not to start, including how the effectiveness of such efforts is evaluated.

Materials:

1. Smoking and Health. Report of the Advisory Committee to the Surgeon General of the Public Health Service. U. S. Department of Health, Education and Welfare, Public Health Service, 1967. P.H.S. Publication No. 1103, $1.25.

2. The Health Consequences of Smoking. A Public Health Service Review: 1967. U. S. Department of Health, Education and Welfare, Public Health Service, 1967. P.H.S. Pub. No. 1696.

HOME ECONOMICS

Purpose: To make students aware of the health problems that result from the use of alcohol and tobacco.

Teenagers need to be properly educated about the use of alcohol and tobacco, as these constitute very real sources of potential medical problems and accompanying social disruptions.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Define and use properly terms associated with alcohol and tobacco:

   a. Tobacco Terms: nicotine, resins, tars, inhalation
   b. Alcohol Terms: alcoholism, isopropyl, alcoholic, methyl, ethyl, withdrawal

2. Describe medical and social problems associated with alcohol, and tobacco and means by which they, as parents, might try to cope with such issues.

3. Demonstrate knowledge of sources of help for alcohol and tobacco problems.

Activities: To accomplish these objectives the student may engage in activities such as:

1. Continue work on Compendium described in the Drug Unit for alcohol and tobacco.

2. Compile a list of places and people from which help may be secured and include in the Compendium: family physician, Hotline, Black Man's Development Center, Alcoholics Anonymous, and so on.

3. Post on the bulletin board, prepare displays, and/or give oral/written reports on newspaper and magazine stories about alcohol and tobacco.

4. View film "What about Drinking?" Compare occasional drinking to alcoholism.

Activities -- Continued

5. View films: "Is Smoking Worth It?", "Tobacco and the Human Body". List the ways smoking may be harmful to the body.

6. Resource Person:
   a. Facts and fancy about tobacco, its use, and the medical problems involved. Could be a panel discussion involving representatives of various views.
   b. Facts about alcoholism and its treatment. Describe how to help a family member with drinking problem.

Materials:

1. Publications from the American Home Economics Association, 1600 20th St., NW, Washington, D.C.20009
   a. Home Economist in Community Programs (#0404, $2.50)
   b. Home Economics Careers in Health and Welfare (0002, 25¢)
   c. Understanding and Meeting Problems of Drug Abuse (6918, 25¢)
2. Reference
   a. Bauer, Health for All, Book 8
   b. Curriculum Resource Bulletin, Health and Family Life Education for the Junior High School, 1964, Washington, D.C.
3. Filmstrips from Catalog of Audio-Visual Materials, D.C. Education Media Center:
   a. "Is Smoking Worth It?"
   b. "Tobacco and the Human Body"
   c. "What About Drinking?"

Career Development Curriculum Guide: Grade 8
Health Occupations, Alcohol and Tobacco

INDUSTRIAL ARTS

Purpose: To promote awareness of the importance of knowledge of the effects of alcohol and tobacco.

Objectives: Upon completion of work in this unit, the student should be able to:

1. To demonstrate knowledge of the effects of alcohol and tobacco, with particular attention to implications for industrial arts.

2. To develop skills in using common machines and tools for construction of a show mobile for displaying communications about alcohol and tobacco.

Activities: To accomplish these objectives the student may engage in activities such as:

1. High Impact: Utilizing the show mobile, incorporate into its displays specific products of work pertaining to alcohol and tobacco use in other subject areas. Tie-in with Mathematics to provide a scale drawing of the show mobile. Tie-in with science for scientifically oriented display. Tie-in with Social Studies.

2. Open discussion: How the use of alcohol and tobacco can affect the industrial arts shop; adverse effects on safety, cleanliness, health; how shop foreman can detect these problems; how shop foremen and other shop personnel might try to deal with these problems.

3. Displays for show mobile: Assign student teams responsibility for designing and executing displays.

   a. A collage of graphics on the positive and and negative aspects of alcohol and tobacco as they affect home, school, and community.
      1) Data on absenteeism, accidents, poor work.
      2) The liquor, tobacco industries.
      3) Resources for helping persons experiencing adverse consequences of alcohol, tobacco.

Activities -- Continued

4. Resource persons:
   a. Rap session with ex-alcoholics, ex-smokers to discuss and assist in the design of displays for the show mobile.
   b. Presentation by representative of advertising industry of industrial arts occupational opportunities associated with advertising displays.