CONSTRUCTION OF A HEALTH SCIENCE GUIDE FOR
COLUMBUS PUBLIC SCHOOLS

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Presented in Partial Fulfillment of the Requirements for
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By

JOY GARRISON CAUFFMAN, B. S., M. A.

The Ohio State University
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Approved by

Adviser
Department of Physical Education
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PROJECT ADVISERS

Dr. W. W. Miller
Assistant Superintendent in Charge of Instruction
Columbus Public Schools

Mr. M. D. Sheatsley
Director of Physical, Health, and Safety Education
Columbus Public Schools

Dr. Wesley P. Cushman
Professor of Health Education
The Ohio State University

Dr. Delbert Oberteuffer
Professor of Physical Education
The Ohio State University

Dr. Elena M. Sliepcevich
Professor of Health Education
The Ohio State University

MEMBERS OF THE CURRICULUM GUIDE COMMITTEE

Regular Members

Miss Mary Baker
Health Science Television Teacher
Columbus Public Schools

Mr. Jerrold Karshner
Science Resource Teacher
Columbus Public Schools

Mrs. Edna Lambert
Teacher
Dominion Junior High School
Columbus Public Schools

Mrs. Molly Pugh
Teacher
Roosevelt Junior High School
Columbus Public Schools

Mr. Donald C. Richardson
Teacher
Crestview Junior High School
Columbus Public Schools
Mr. Carroll Smith
Health Science Television Teacher
Columbus Public Schools

Advisory Members

Mr. Joseph L. Davis
Director of Publications and Public Information
Columbus Public Schools

Dr. Carey B. Paul
School Physician
Columbus Public Schools
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CHAPTER I

INTRODUCTION

The Columbus Public School system today emphasizes health as a major objective in its educational program. Its teachers and administrators readily recognize the relationship of health to successful and happy living and are concerned with pupil health not only at school but at home and in the community as well. To maintain and improve the physical, social, mental, and emotional health of all pupils, the total school health program in the Columbus Public Schools is designed to contribute to the solution of individual health problems. The American Council on Education states that the first objective of all public schools is to help the individual pupil "to improve and maintain his own health and take his share of responsibility for protecting the health of others."1 Today the Columbus Public Schools fulfill this objective through provisions for healthful school living, health instruction, and health services.

But health has not always been a major educational objective in the Columbus Public Schools. The first public

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1American Council on Education, A Design for General Education, p. 31.
school was opened in 1826, but it was not until 1845 that a Board of Education existed and that an annual report was written. Mention was made of the teaching of anatomy, physiology, and hygiene in the high school in the first annual report; however, it was not until 1889, sixty-three years after the first public schools were opened, that physiology and hygiene were taught in grades 1-8. During 1889 each physiology and hygiene course taught in the elementary grades was described in the annual report. The course description for the eighth grade physiology course reads as follows:

Grade 8
Physiology

Lessons on the human body with special reference to health—the bones, their uses; the muscles, their uses; the skin, its uses, bathing, clothing, the digestive apparatus, organs and uses (1 lesson per week).2

Between 1889 and 1909 the one day per week physiology course was continued in grades 1-8. In 1894 the title of the course was changed from Physiology to Physiology and Hygiene.

In 1909, when the first junior high school, a unit of our public school system commonly consisting of grades seven, eight, and nine, was founded in Columbus, the program of studies was reorganized. Under this reorganization, physiology and hygiene remained in the junior high school program.

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2Columbus Public Schools, Annual Report, 1889, p. 318.
However, the grade or grades at which physiology and hygiene were to be taught were optional, depending on the discretion of the building principal.

A new Department of Physical Inspection was created at the beginning of the 1913 school year. The creation of this department marked the first effort on the part of the Columbus Public School system to provide health services for its students.

During World War I, the one day per week course Physiology and Hygiene in the junior high school, was renamed Hygiene. Following World War I, an Ohio school law made mandatory the provision of health instruction on such matters as the effects of alcoholic drinks on the human body and accident and fire prevention. A series of health readers were purchased for use in the elementary schools, and a course of study entitled the Health Education Program was written. Definite gains were made in the health program during this period.

When the 1929 depression came, the central office positions in health and physical education were abolished. For the next twelve years the citizens of Columbus showed a growing concern for the role of health and physical education.

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3Columbus Public Schools, Annual Report 1913, p. 185.

4T. C. Holy and Others, A Study of Health and Physical Education in Columbus Public Schools, p. 163.
in the public schools. Because of this concern in 1940 the superintendent of schools engaged the Bureau of Educational Research at the Ohio State University to conduct a survey of health and physical education in the Columbus Public Schools. The survey staff published a book entitled *A Study of Health and Physical Education in Columbus Public Schools*. As a result of this extensive study, a number of recommendations were made, many of which were to guide future developments in the health and physical education program. One recommendation was fulfilled almost immediately. A Department of Physical, Health, and Safety Education was established in 1941 and a director was appointed to coordinate and supervise the program in the Columbus Public Schools.\(^5\) In 1943, *A Tentative Guide for Health Education in the Elementary Schools* was published.\(^6\) World War II influenced the content of the instructional program in health; however, the time allotment for the direct teaching of health remained unchanged at this time.

Another major recommendation of the 1940 survey was accomplished in 1955 when an Assistant Director of Physical, Health, and Safety Education was appointed. The following year a curriculum committee moved biology from the eighth

\(^5\)Ibid., p. 14.

to the tenth grade and replaced it with a one semester course in health and in general science. This change promoted the study of health in the junior high school.

In 1957, the Assistant Superintendent in Charge of Instruction in the Columbus Public Schools called a special junior high school principal's meeting, the purpose of which was to critically examine the junior high school program of studies. All directors and assistant directors of instruction were asked to be present. As a result of this meeting, a number of course changes were inaugurated. The one day a week hygiene course taught in grade nine for over sixty-five years was dropped. In grade eight, a new full year course in health science replaced the one-semester course in health and the one-semester course in general science.

Health science was defined as that branch of science which deals with the physical, mental, emotional, and social well-being of man. The health science course was to be a study of personal and community health. Accordingly, it was intended to be an integral part of the health curriculum and an intrinsic part of the science curriculum. Administrators believed that health instruction was an essential part of the junior high school program of studies and that a course in health science should have academic standing. The inclusion of the full year health science course carried out another recommendation of the 1940 survey.
Soon after this special principal's meeting, the Assistant Superintendent in Charge of Instruction assigned the Department of Physical, Health, and Safety Education the task of developing a teacher's guide for the newly created health science course. This guide was also a recommendation of the Holy survey. The responsibility of developing the Health Science guide became the specific assignment of the Assistant Director of Physical, Health, and Safety education.

**Purpose of the Study**

The purpose of this dissertation is to develop a useful instructional guide for eighth grade health science teachers. The best possible research procedures in curriculum development are utilized. Fundamental objectives in the new health science course are stated and interpreted. The guide is designed to meet these objectives. The development of this instructional guide in health science is important because it proposes to give orderliness, sequence, and selection to the health science course content. Only the most modern instructional methods are recommended by the guide. Furthermore, the guide will foster more effective communications between intra- and inter-school groups. The guide will assist in interpreting the health science course to the total school staff, parents, and all other interested parties.

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The real aim of the guide is to serve as an effective and useful instructional aid for all health science teachers. But a guide is especially needed by new and beginning teachers, and it is also particularly necessary for teachers not adequately qualified in the field of health science. During the 1957-1958 school year, only six of the sixty health science teachers in the Columbus Public Schools held a major in health education. Many teachers, regardless of their educational background, do not teach with equal facility in all areas of health. The Health Science guide will be of value because teachers will have the opportunity for individual and group growth through their involvement in the study. Indirectly, the guide should make the health education for over eight thousand eighth-graders in the Columbus Public Schools more meaningful.

Limitations of the Study

The limitations of this study in curriculum research should be recognized. The first is that of time. The first draft of the Health Science guide had to be completed in less than seven months, in a period from May, 1957, to October, 1957. During that time, eight of the eleven research steps had to be carried out. Even though a curriculum committee was available and evening hours used, collection of data and analysis of it had to be completed by a deadline. Also, since the assignment came in May, the committee could
not carry on a specific interest study of Columbus pupils. However, authoritative readings of adolescent growth characteristics, interests, and needs were considered adequate substitutes.

A second limitation of the study was the conflict which exists between health science and general science. There were several reasons for this. During the 1956-1957 school year, for the first time, a half-year course in health and a half-year course in general science were offered in the eighth grade. This organizational plan was changed in 1957 and a full year course in health science was introduced. As a result of the change in subjects offered, there were many misunderstandings about the course. Although the Division of Instruction attempted to rectify these misunderstandings, the task was not an easy one, especially since during the 1957-1958 school year no new textbook could be adopted for the new course and it was necessary to continue to use the health and the general science textbooks.

A third limitation was that no one statement of an educational philosophy for the Columbus Public Schools existed in writing. It was difficult, therefore, to develop a broad comprehensive frame of reference for the study, and considerable time had to be devoted to formulating a general philosophy for curriculum development and to developing a health science point of view.
Curriculum data does not necessarily lend itself to statistical analysis, nor can the development of an instructional guide be the work of one person. The fourth limitation, consequently is that the conclusions often represent the best judgment of the Curriculum Guide Committee, and the process of how the decisions of such a committee were made cannot be adequately described.

It should be made clear that this project involves only the construction of a Health Science guide; evaluation has thus not been made of the course, but only of the guide. Evaluation of pupils' progress was carried on by the classroom teachers throughout the course. It is hoped that their evaluation of the course as they taught it is reflected in their judgments regarding the revisions of the guide.

**Research and Developmental Procedures**

What procedures should be used in developing the Health Science guide? The first step in determining the answer to this question was to obtain consultation on curriculum building techniques. Then, many excellent references on curriculum research were read before planning the steps in the development of the guide. Several of the most helpful books were *The Elements of Research*, by Frederick Lamson Whitney; *Principles and Practices of Teaching in Secondary Schools*, by Thomas M. Risk; *School Health Education*, by Delbert Oberteuffer; and *Toward Better Health Education for Connecticut Youth*, by Ruth V. Byler.
All of the steps in the development of the guide were achieved with the aid of a Curriculum Guide Committee. This committee consisted of a group of six outstanding health teachers selected after a careful study had been made. All health science teachers in the Columbus Public Schools were considered as possible candidates. Criteria for selection of committee membership were formulated in the form of the following questions: What was the teacher's major field of preparation? What was the teacher's minor field of preparation? What degree did the teacher hold? From what university or college did the teacher graduate? What was the teacher's cumulative point hour ratio in college? How did the building principal rate the teacher? What grades had the teacher taught? How interested was the teacher in health science?

The information for answering the above questions was secured from two sources—the individual teacher's record folder, maintained by the Department of Personnel Services of the Columbus Public Schools, and personal interviews.

Throughout this research project, the Curriculum Guide Committee of outstanding health teachers was involved in planning and executing the study. The committee had two advisory members, the school physician and the Director of Publications and Public Information. The Assistant Director
of Physical, Health, and Safety education served as chairman of the committee.

The steps that are described in the ensuing chapters tell the story of the development of the Health Science guide. It was important to select sound research and developmental procedures so that a useful instructional guide for eighth grade health science teachers might be designed. A list and a brief description of these procedures according to chapters follow.

**Studying the Present Program (Chapter II)**

All courses in the present junior high school programs were studied. A "Synopsis of the Program of Instruction Offered by the Columbus Public Schools" was analyzed and publications approved by the board of education for each junior high school course were investigated. The extent to which health science and general science were being taught in other junior high school subjects was determined. The review of present courses revealed the objectives, areas of study, and teaching methods used in other courses.

**Collecting and Reviewing Pertinent Literature (Chapter III)**

Health curriculum materials, consisting for the most part of courses of study, syllabuses, and resource units, were collected from selected cities, states, and national professional associations in the United States. Health textbooks for pupils were obtained from reputable book
companies. This literature was analyzed, reviewed, and used as a basis for identifying health problem areas suggested by health authorities, curriculum builders, and textbook writers and as a basis for selecting a format for the guide.

Determining the Aim and Objectives of the Guide (Chapter IV)

A statement of philosophy was formulated which included general principles of curriculum development and a health science point of view. The aim and the objectives of the guide were determined and described.

Identifying Needs and Interests of Pupils (Chapter V)

Many excellent sources describing the unique growth characteristics of boys and girls during adolescence were read. Needs and interests associated with these growth characteristics serve as guideposts in selecting the health problems to be studied.

Securing Judgments of Administrators, Teachers, Nurses, Counselors, Parents, and Health Authorities (Chapter VI)

Staff meetings involving school personnel and city-wide parent consultant meetings were arranged for the purpose of identifying common pupil health problems and for the purpose of securing suggestions for the construction of the guide. Also, conferences with health authorities were held in order to secure their comments on selection of problem areas.
Selecting Problem Areas (Chapter VII)

Some forty problem areas were selected and arranged under unit titles. Evidence obtained from one or more of the research procedures completed earlier in this study provided the basis for the selection of each problem area.

Surveying and Screening Available Resources (Chapter VIII)

Health resources from the schools, at the central office, in the community, and out-of-town, relating to selected health problem areas, were surveyed. Criteria for screening these resources were established and the selected resources were compiled as fact-finding sources to be used within the resource units.

Organizing the Resource Unit (Chapter IX)

The organization of the resource unit was determined and an outline of the unit, which included a title page, an introductory page, and the body of the resource unit, was prepared. The general make-up of the resource unit followed the problem plan; thus the content material in the unit consisted of a series of problems to be solved. These problems were based on pupil needs and interests to encourage the use of the psychological approach in the presentation of subject matter. It was anticipated that these problems would be solved by the problem-solving technique; therefore, evidence was presented to support the study of problems by this method.
Using the Guide Experimentally (Chapter X)

The finished guide was introduced to those who had helped to develop it through various in-service activities. A conference and a health problems course were held for teachers and administrators. Individual conferences were planned so that members of the central office staff could become acquainted with the guide. A special meeting was arranged for parent consultants, and written communications were sent to community consultants. During the 1958-1959 school year the content of the guide was adapted for educational television. Since the time that the guide was released in October of 1957, teachers have been assisted by such techniques as individual visitations, area meetings, an institute, and conferences so that they could make the best possible use of the guide.

Evaluating the Guide (Chapter XI)

Although the guide was being evaluated continually by those who used it, in the spring of 1959 an organized attempt was made to evaluate the instructional usefulness of the guide. Evaluative tools in the form of the interview, the questionnaire, and the review were selected and constructed, and data were collected and interpreted.
Recommendations and Suggestions (Chapter XII)

The evaluation resulted in recommendations for revising the guide, which, when revised, should be greatly improved. Also, so that other health educators might benefit, suggestions for constructing curriculum guides are presented in the last chapter.
CHAPTER II

STUDYING THE PRESENT PROGRAM

The first step in the development of the Health Science guide was undertaken in May, 1957. A careful study of all courses in the seventh, eighth, and ninth grades were made to determine to what extent health science was being taught in other subject areas. As a part of the same study, the committee determined to what extent general science was being taught in other subjects areas. The Curriculum Guide Committee needed to know the contributions of other subjects to health science before selecting the content for the Health Science guide.

Analysis of the Synopsis Chart

The committee approached this task by examining the "Synopsis of the Program of Instruction Offered by the Columbus Public Schools," a publication containing a condensation of each junior high school course in the Columbus Public Schools. It was evident from this examination that some objectives and units of study were common to more than one subject. The Curriculum Guide Committee was especially interested in this fact when the overlappings involved health. For example, certain units of study in home economics were...
found also in health science. These units of study were
Care of the Sick, which included both elementary first aid
and home care of the sick, and Food and Nutrition, which
contained basic information about good nutrition. The
following excerpt from the synopsis chart shows the aim, the
broad areas of study, and the units of study taught in the
home economics course.

THE JUNIOR HIGH SCHOOL HOME ECONOMICS PROGRAM
OFFERED BY THE COLUMBUS PUBLIC SCHOOLS

HOME ECONOMICS

The home economics curriculum is aimed primarily
toward helping girls solve their problems relating to home and family living. Units of study
grow out of three broad areas:

Understanding human behavior
Developing socially
Mastering the tools of homemaking

Required in grade seven

Elective in grades eight and nine
(Time Allotment—90 to 450 minutes per week)

At the junior high school level, units of study
and their content include:

The Girl -- her personal relations with her
family and friends
Child Care -- the students' responsibilities
in caring for children in their
own homes and in homes of others
Homemaking -- the students' part in keeping the
home clean and well-organized
Care of the Sick -- elementary first aid and
home care of the sick

\[1\]

\[W. W. Miller and Others, Synopsis of the Program of
Instruction Offered by the Columbus Public Schools.\]
Food and Nutrition --basic knowledge of good nutrition, familiarity with the home economics laboratory equipment and preparation of simple foods

Clothing and Textiles--personal grooming, care of clothing, and construction of simple garments

Investigation of Each Junior High School Course

Since the synopsis chart was so highly condensed, it was necessary to make a more detailed study of the present junior high school program in order to discover the extent to which health science was correlated or integrated with other subjects. The correlation of health science with other subjects refers to the relationship within the curriculum of health to physical education, of health to English, etc. When teachers plan to include health material in the teaching of other subjects, such as general science and industrial arts, the result is correlation. The integration of health science with other subjects implies that a theme or a large problem area, broader than any one subject, has been selected for study. Knowledge from many different subjects, such as health science and social studies, are used to achieve the solution to the theme or broad problem. The relation of the parts to the whole, referring to the knowledge from one or more subject areas to the theme, is called integration.

\(^2\) Delbert Oberteuffer, *School Health Education*, p. 96.

\(^3\) Ibid., p. 105.
It should be pointed out that the broad problem under study is of primary importance, not specific subject matter.

In making this investigation, the committee referred to the booklet *Your Future in Junior and Senior High School.* Each subject appearing on this program of studies in grades seven, eight, and nine was examined. It was found, for example, that in the seventh grade program, the first subject listed is the self-contained classroom. The publications approved by the board of education for this course were studied. These included the teacher's guide, the pupil's textbook, and resource materials. As members of the Curriculum Guide Committee scanned these materials, they abstracted the health science and the general science content from each of these publications. The same procedure was followed for each course that appeared on the junior high school program of studies. The content was then outlined by principal health topics and by principal science topics.

After the printed materials had been reviewed for each subject, the director, assistant director, or resource teacher in charge of the given subject or subjects was interviewed by a member of the Curriculum Guide Committee. During this interview, the following questions were asked. What health science, if any, do you cover in teaching your subject?

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*Novice G. Fawcett, Your Future in Junior and Senior High Schools,* pp. 6-7.
Do you use a correlated or integrated pattern of health science instruction? What general science, of any, do you cover in teaching your subject? Do you use a direct, correlated or integrated pattern of general science instruction? The direct pattern of instruction implies that general science is the "subject" to be taught and that there are no divergent or competing interests.  

This close examination of the junior high school program of studies revealed that opportunities in other subject areas are utilized for correlated health science and general science instruction. Health and science then become vehicles by which other subjects are taught. Certain subject areas, because of their inherent nature and composition, overlap with other subject areas. Correlated general science instruction occurred in industrial arts only. Correlated health science instruction occurred in English, fine arts, home economics, industrial arts, music, and physical education. The following outline, an example of this correlation, shows the correlation of health with physical education.

I. Good grooming
   A. Suitable clothes for physical education
      1. Proper footwear
      2. Appropriate and clean costume
      3. Dress for the weather
   B. Posture

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5 Oberteuffer, op. cit., p. 55.
6 Ibid.
C. Cleanliness
   1. Need for showers following activity
   2. Use of deodorants
D. Use of own personal belongings
   1. Comb
   2. Lipstick
   3. Towel
   4. Clothing

II. Guidelines for participation in physical activity
   A. Warming up before strenuous activity
   B. Alternating rest and activity
   C. Conditioning

III. Changes as I grow up (menstruation)

The Curriculum Guide Committee also learned that opportunities in the self-contained classroom are utilized for integrated health science and general science instruction. In the self-contained classroom, no one subject area is of primary concern. The organization of learning experiences is built around a central theme. This central theme may utilize many subjects to achieve a given objective or purpose. In such an integrated approach many areas of learning and experience can be drawn upon in solving a problem. It is the problem to be solved, and not the subject matter, that is of major concern. The following outline points out the principal health topics that are integrated with other subjects in the self-contained classroom.

I. "Getting to Know You" (Unit I)
   A. Physical changes taking place during early adolescence
   B. Balanced diets
   C. Proper care of the human body
D. The role of communities in disease prevention
E. Studying people who have made contributions to healthful living

II. "Having a Wonderful Time" (Unit V)
A. Wise use of leisure time
B. Family recreation
C. The relation between leisure time and good health and well-being
D. Criteria for selecting reading matter, radio and television programs, motion pictures, good music, etc.
E. Selecting recreational activities which represent a balance between commercial amusements and those which call for individual and group effort.

Summary

A complete summary of the findings from this first research procedure was made and eventually was placed in the Health Science guide under the title of "Health and Science Instruction in Other Junior High School Subjects." The summary report includes the health science and general science instruction in subjects other than in health science. The significance of this information to the health science teacher is emphasized since he needs to be aware of the type and extent of health science instruction in other subject areas. The report also classifies all information under three patterns of instruction—namely, direct, correlated, and integrated teaching. The principal health topics and the principal science topics dealt with in each course are outlined and grouped under the appropriate
instructional pattern. Each pattern is defined as it is introduced.

The completion of this first procedure in the development of the *Health Science* guide was very helpful to the Curriculum Guide Committee. For example, objectives and units of study in other courses in the junior high school program gave the committee an understanding of how the specific objectives and units in the *Health Science* guide might be formulated.

Health science instruction in other subject areas suggested certain adolescent health needs and interests. In home economics and in the self-contained classroom overlapping with health science occurred in the areas of social health, nutrition, care of the sick, first aid, recreation, and emotional health. Some repetition of content is unavoidable, but this is not necessarily undesirable, because some of the problems that pupils encounter in every day living occur frequently. Such problems should be approached in different ways, from different points of view. Furthermore, some repetition is necessary for learning.

The Curriculum Guide Committee believed that they should not attempt to decide whether these content areas should be repeated in the health science course until more evidence was presented. Without a doubt, the health science content taught in other subject areas would influence the
selection and relative emphasis of tentative content areas placed in the guide.

The methods used in teaching other junior high school subjects had a direct relationship to the types of pupil activities that were later to be suggested in the resource units of the Health Science guide. As Woodson A. Fishback says, "Those responsible for health instruction face the question of method once they have formulated their instructional objectives and decided upon the general content and problems to be explored."\(^7\) This was precisely the situation that the committee faced as the development of the guide progressed.

\(^7\) *Designing Modern Health Education Experiences for Youth*, p. 31.
CHAPTER III

COLLECTING AND REVIEWING PERTINENT LITERATURE

For the purpose of analyzing content and comparing formats, it was necessary for the Curriculum Guide Committee to collect and review pertinent literature in the field of secondary health education. This review constituted the second research step in the development of the Health Science guide, although literary research and critical reading were employed throughout the project. The types of pertinent literature collected and analyzed at this time were health curriculum materials from selected cities, states, and national professional associations in the United States and pupil health textbooks from reputable book publishers.

Health Education Curriculum Materials

Some of the health curriculum materials related to the total school health program. However, the majority of the materials studied were resource units, syllabuses, and courses of study. A resource unit consists of a broad collection of suggested learning activities and materials organized around one or more related health topics. A series of resource units make up a syllabus, which is an outline of a single health course. Sometimes a syllabus is called a
guide, as it is in this study. A series of sequential syllabuses comprise a course of study.

Resource units, syllabuses, and courses of study were obtained by having a jury of four health educators propose a list of cities and states in the United States having outstanding health education programs. Letters requesting health materials were sent to twelve states and eighteen cities.¹ A few outstanding references on health education policies and methods were used; these materials represented the consensus of opinion of outstanding health authorities on subject matter areas to be covered. These references were secured from the National Education Association, the American Medical Association, and the State Board of Education of Ohio.

**Health Textbooks for Pupils**

With the assistance of several directors and assistant directors from the Columbus Public Schools, a rather complete list of the names of the textbook publishers, with their respective addresses, was compiled.

After the book publisher list had been prepared, a form letter was sent to each of the persons or firms. The publishers were asked to send sample copies of current textbooks suitable for use in the eighth grade health science course. The publishers were told about the nature of the

¹A bibliography of the health curriculum materials received from these city and state supervisors may be found on pp. 201-203.
study in progress and of the plan to develop a Health Science guide for teachers.

All companies acknowledged the letter and most companies sent complimentary copies of health textbooks for the committee's examination. It should be noted that many of the textbooks which were received were more appropriate for high school than for junior high school.2

Summary

The health education curriculum materials and health textbooks were catalogued and placed on a reference shelf for the immediate use of the Curriculum Guide Committee. All this literature was carefully reviewed, its content summarized, and its formats composed.

Problem areas suggested by health authorities in books and pamphlets dealing with health philosophy, subject matter, and methods were studied by the committee. Information from three of these sources was most helpful.

The first of these authoritative sources studied was Health Education, a textbook prepared by the Joint Committee of Health Problems of Education of the National Education Association and the American Medical Association. This textbook states:

We have selected a dozen big health problems with which health education should be concerned.

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2A bibliography of the health textbooks is found on pp. 203-205.
Mastery of the information growing out of this particular selection of problems will go a long way in enabling the teacher to develop health education according to the needs and dictates of his own situation.

A Dozen Health Topics

Food and Nutrition  Colds and other respiratory diseases
Exercise, Rest and Other Communicable Diseases
Sleep  Heart Diseases and Rheumatic Fever
Vision and Hearing Dental Caries
Mental Hygiene Accidents
Sex Education
Alcohol and Tobacco

The second of these references studied was Suggested School Health Policies, a pamphlet prepared by the National Committee on School Health Policies of the National Conference for Cooperation in Health Education. This authoritative text states that content areas in health education should meet the needs and interests of boys and girls:

... In the junior high school emphasis may be placed on each student's personal health problems, and on helping him secure an increased understanding of the scientific basis of health behavior in the home, school, and community. This would include attention to the growth and functions of the human body, healthful daily living; food, rest, and exercise; personal development and appearance; first aid; safety, education as to the effects of alcohol and narcotics; mental health, and understanding the prevention and control of disease.  

^3^Joint Committee on Health Problems in Education of The National Education Association and the American Medical Association, Health Education, pp. 45-6.

^4^National Committee on School Health Policies, Suggested School Health Policies, p. 13.
A third of these references studied was Ohio Elementary School Standards, a booklet published by the State of Ohio. This booklet suggests that areas of health instruction will not vary greatly from grade to grade. The approach, however, will be quite different depending upon the child's particular needs and interests at each age level.

Suggested Areas

<table>
<thead>
<tr>
<th>Health appraisal</th>
<th>Care of the eyes, ears, nose, and throat;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical care</td>
<td>heart and circulation;</td>
</tr>
<tr>
<td>Healthful school living</td>
<td>care of the feet</td>
</tr>
<tr>
<td>Exercise, rest, and</td>
<td>Bacteria and disease</td>
</tr>
<tr>
<td>relaxation</td>
<td>Community health</td>
</tr>
<tr>
<td>Personal appearance and</td>
<td>Alcohol, tobacco,</td>
</tr>
<tr>
<td>good grooming</td>
<td>drugs, narcotics</td>
</tr>
<tr>
<td>Personal and social</td>
<td>Accident prevention</td>
</tr>
<tr>
<td>adjustment</td>
<td>First aid</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Fire safety and prevention</td>
</tr>
</tbody>
</table>

Careful consideration was given to these publications developed at the state and national level. Problem areas suggested by these authorities were considered as possible areas to be covered in the Health Science guide.

Problem areas suggested by curriculum builders in courses of study, syllabuses, and resource units were studied by committee members. Probably of foremost importance was the fact that the committee was able to identify a number of major health problem areas common to teen-agers throughout the country. When the materials were reviewed, this question

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was asked: What content areas were taught in eighth grade health classes throughout the United States? In attempting to answer this question, the committee found that only a few of the cities, counties, and states included health content areas specifically for eighth graders. (County has been mentioned for the first time because in writing to the California State Department of Education, the author was referred to several specific county health departments. As a result some curriculum materials were received from counties.) However, in six instances, health content areas were defined for eighth graders. These content areas are tallied and appear in Table 1 on page 31. The areas most frequently taught in direct health courses at the eighth grade level were safety and first aid, nutrition, community health, disease, habit-forming substances, health appraisal and physical growth.

In surveying these materials, the committee asked still another question: What content areas are taught in junior high school health courses? This question was asked when it was learned that some cities did not offer an eighth grade course but did offer a course in either or both the seventh and ninth grades. Also, it was recognized that certain states did not break down by grade level the junior high school health education program. By using this broader three-grade-level approach, the committee was able to include ten selected cities, counties, and states in the tabulation.
<table>
<thead>
<tr>
<th>Content Areas</th>
<th>Cincinnati Public Schools Cincinnati, Ohio</th>
<th>Kansas City Public Schools Kansas City, Missouri</th>
<th>Napa Public Schools of Napa, Calif.</th>
<th>State of Indiana</th>
<th>State of Virginia</th>
<th>Tulare County Schools Visalia, Calif.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice and Use of Health Products</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Health</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Health</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diseases</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habit-Forming Substances</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Appraisal</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthful Home Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutrition</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Hygiene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Growth</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety and First Aid</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Health</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The health content areas taught in junior high schools in selected cities, counties, and states in the United States can be seen clearly from Table 2 on page 33. Safety, diseases, and health appraisal lead the list of content areas taught. The data in Table 2 seems to be in harmony with national studies. Other areas of high frequency, indicated in Table 2, were mental health, nutrition, social health, habit-forming substances, and community health.

Problem areas appearing in the pupil health textbooks were studied by the committee, which was interested in learning about the specific health topics or problems authors elected to include in their textbooks. Many of the textbooks were suitable for high school rather than for junior high school health instruction. Their contents were thus not analyzed. In fact, only the content of books written for the eighth grade was analyzed. For example, when a series of books were available for grades six, seven, and eight, only the grade eight book was analyzed for content. It was evident for the most part that when a given textbook was one in a series, it was less comprehensive in scope. Books written about one specific aspect of health, such as the Red Cross First Aid Textbook for Juniors and Manners Made Easy, were not included in the content analysis. A number of textbooks combining physical science and health science also were omitted. This procedure was followed because these books did not treat health as their primary objective.
TABLE 2

CONTENT AREAS TAUGHT IN JUNIOR HIGH SCHOOL HEALTH COURSES (GRADES 7, 8, AND 9) IN SELECTED CITIES, COUNTIES, AND STATES IN THE UNITED STATES

<table>
<thead>
<tr>
<th>Content Areas</th>
<th>Cinn., Public Schools Cinn., Ohio</th>
<th>Denver, Public Schools Denver, Colo.</th>
<th>Kansas City Public Schools Kansas City, Mo.</th>
<th>Minn., Public Schools Minn., Minn.</th>
<th>Napa, Public Schools Napa, Calif.</th>
<th>Univ. of the State of New York</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care of the Sick</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Child Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Community Health</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Consumer Health Education</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Dental Health</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Diseases</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Exercise and Recreation</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Habit-Forming Substances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Health Appraisal</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Healthful Home and School Environments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Mental Health</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Nutrition</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Personal Hygiene</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Physical Growth</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Preparation for High School</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Rest and Sleep</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Safety and First Aid</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Social Health</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Special Senses and Organs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

Note: X indicates that the content area is taught.
The content areas presented by eighth grade textbooks can be seen in Table 3, p. 35. Aspects of health education relating to structure and function of the human body, personal hygiene, nutrition, safety and first aid, habit-forming substances, mental health, recreation and fitness, and the special senses were covered in six of the seven books. Physical growth, rest, relaxation, sleep, and diseases were discussed and described in five of the books.

The second research step made it possible for the Curriculum Guide Committee to identify health problem areas suggested by health authorities, curriculum builders and textbook writers. In order of frequency, the most discussed problem areas were safety and first aid, diseases, mental health, food and nutrition, habit-forming substances, health appraisal, personal hygiene, recreation and fitness, social health, community health, rest and relaxation and sleep, physical growth, and dental health. The collection and review of pertinent literature was of invaluable assistance to the committee in determining suitable health problem areas and in selecting a format for the guide. Many of the materials proved to be indispensible references.
### Table 3

**Content Areas Appearing in Eighth Grade Health Textbooks**

<table>
<thead>
<tr>
<th>Content Areas</th>
<th>Building Your Health</th>
<th>A Sound Body</th>
<th>Good Health for All</th>
<th>Good Health for Better Living</th>
<th>Into Your Teens</th>
<th>Wider Horizons</th>
<th>Building Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care of the Sick</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Health</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Health</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diseases</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Habit-Forming Substances</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Health Appraisal</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthful Home &amp; School Environments</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Service to Others</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Health</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Nutrition</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Personal Hygiene</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Growth</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Planning Ahead</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recreation &amp; Fitness</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rest, Relaxation, &amp; Sleep</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
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CHAPTER IV

DETERMINING THE AIM AND THE OBJECTIVES OF THE GUIDE

The third step in the development of the Health Science guide was initiated in June of 1957. The Curriculum Guide Committee realized at an early date that it was necessary for it to be clear about philosophy and goals. Principles relative to the development of the Health Science guide needed to be spelled out so that the efforts of committee members could be unified. These principles could then serve as guideposts for future committee action.

Philosophy

The committee made a survey of curriculum materials at the Board of Education and could not find a complete statement of the educational philosophy of the Columbus Public Schools. The Assistant Superintendent in Charge of Instruction stated that all school publications expressed, in part, the philosophy of the school system. This philosophy is thus being continually revised and restated with every new publication. Consequently, the educational philosophy never becomes merely a list of "faith objectives." Since the Curriculum Guide Committee was unable to discover a specific statement of philosophy, members of the committee developed a list of general principles. These principles,
important concepts or fundamental truths set up as important
guides for curriculum development, are as follows: (1) 
Curriculum development cannot be accomplished in a short 
period of time. (2) The publication of a curriculum guide 
does not guarantee that changes will be made in the class­
room. The change must occur first in people. (3) The City 
of Columbus should influence the curriculum in the Columbus 
Public Schools. (4) Emphasis in curriculum planning should 
be placed on flexibility and suggestibility. (5) The needs 
and interests of boys and girls in society must be consid­
ered in curriculum development. (6) All problems in cur­
riculum development cannot be solved immediately. (7) 
Released time for teachers is needed for curriculum develop­
ment. (8) Learning to communicate with others is basic to 
all curriculum improvement. (9) Boys and girls should 
participate in curriculum planning at the local level.

Committee members also developed a health science 
point of view (which was later to appear in the introduction 
of the Health Science guide). This point of view states the 
following basic principles and beliefs regarding health 
education: (1) The health science course should be offered 
to boys and girls in mixed classes. (2) The health of the 
total child, including emotional, social, and mental health 
as well as physical health, should be considered. (3) There 
are health problems unique to the adolescent boy and girl. 
(4) Learning experiences in health science will be meaningful.
only when teachers help pupils solve their real problems. (5) Pupils learn best when they understand objectives and purposes. (6) Materials within the resource unit must be related to the psychological drives of pupils. (7) The whole community helps to define the health needs and interests of pupils. (8) The only measure of teaching success in health science is the degree to which behavior is changed. (9) The health science program must solicit the cooperation of the home. (10) Resources from the Central Office and from the local school are vital to the organization of every health science course. (11) The health science program must be coordinated with other areas of the junior high school program.

**Aim of the Guide**

With these principles of curriculum development in mind and with the development of a point of view on what the course should accomplish, it became a simple matter for the Curriculum Guide Committee to formulate the aim and objectives of the guide. The aim of the Health Science guide is to provide the teacher with a useful instructional aid which will help to improve the teaching-learning situation.

**Objectives of the Guide**

To reach the larger aim of the guide, certain specific and immediate objectives had to be outlined and agreed upon. These immediate objectives are best expressed in terms of
what the resource units should do for the teacher. The resource unit should—

1. Present problems that meet the needs and interests of the pupils.

2. Acquaint the teacher and pupils with useful up-to-date, fact-finding resources that can be obtained from the school and central office, from the larger community, and from out-of-town sources.

3. Identify a variety of worthwhile pupil activities that will help to make the content material more vital and meaningful.

4. Offer suggestions for pupil evaluation that will assist the teacher and the pupils in determining if the objectives of the resource units are being reached.

Summary

The importance of stating the aim and the objectives of the Health Science guide cannot be over-emphasized since these goals represent what the guide is trying to accomplish. They received close scrutiny many times before, and many times after, the first draft of the guide was completed. The extent to which these goals are met will be determined when the guide is used experimentally in the classroom and when the guide is formally evaluated.
As stated in Chapter IV, the Curriculum Guide Committee agreed that certain principles of curriculum development should be followed. One of these principles stated that the needs and interests of boys and girls in society should be considered. The committee also concluded that there are health problems unique to the adolescent. Therefore, in this fourth research step, which was completed during June of 1957, the needs and interests of the adolescent were identified. These needs and interests later served as guideposts in selecting health problems.

**Growth Characteristics**

The features and qualities that are distinctive to each developmental stage are called growth characteristics. For the purposes of this study, the committee was particularly interested in the unique growth characteristics of boys and girls during the period from childhood to maturity called adolescence. Most of the thirteen-year-olds, the age level of the students in the health science course, have already entered the adolescent period.
Many excellent resource materials were found that described the physical, mental, and social growth characteristics of the early adolescent. For example, *These Are Your Children*, by Gladys Gardner Jenkins and others, *An Introduction to Child Study*, by Ruth Strang, and *How Children Develop*, by the Faculty of the Ohio State University School. As a result of many readings, a summary of the growth characteristics of the eighth grader was prepared. In summarizing physical growth characteristics a preliminary discussion centers around the acquiring of secondary sex characteristics since these physical changes are not only different for boys and girls, but also because these changes occur earlier for one sex than for the other.

Physically, girls mature earlier than boys. "The majority of girls," Ruth Strang writes, "reach their maximum rate of growth between the eleventh and fourteenth years inclusive, whereas boys usually show their greatest increase in stature between the ages of fourteen and sixteen years inclusive."

During these early teen-age years, "Boys experience their first nocturnal emission. Masculine characteristics develop which are distinctive of virility, such as deepening voice, angular face, beard, broadening chest, and pubic hair." Girls experience their first menstrual

1 *An Introduction to Child Study*, p. 587.

period at an average age of thirteen years. Their sebaceous glands, secreters of fatty substances, are becoming more active. Feminine characteristics appear, such as development of the breasts and pubic hair. The body becomes more rounded and the hips broaden. (The information that follows is single spaced for purposes of emphasis, not to signify verbatim quotes.)

Physical Growth

The eighth grader

is in excellent health, but needs frequent health examinations; eats insatiably, especially his favorite foods; gains weight and grows taller; may be bigger or smaller than his friends; has an unstable nervous system; is undergoing glandular changes which effect his whole body; seems clumsy and has difficulty in coordinating his body; desires skill in group games and sports; tends to show off if physically proficient; has increasingly poor posture; tires easily; is maturing physically; grows very rapidly, sometimes unevenly with features out of proportion to size—waist, arms, and legs too long, feet too big; may have allergies and other skin disorders; worries about diseases; perspires freely; obtains all of his permanent teeth, except wisdom teeth; is acquiring secondary sex characteristics; begins to attain an adult figure.

Mental Growth

The eighth grader

is approaching mental maturity; loves to argue; expresses feelings frankly and freely; joins in

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3Clarence G. Moser, Toward Understanding Girls in Early Adolescence, p. 2.
group discussions; is capable of small group planning; memorizes easily; increases his ability to make judgments; expresses written ideas skillfully; likes to read books about great men in science; curious about diseases; is overly concerned with his own feelings; experiences many combinations of anxieties; is self-conscious about his physical appearance; worries about the appearance of secondary sex characteristics and needs guidance in sex problems; fears failure; wants to succeed; may choose a non-constructive activity in order to succeed; is superstitious; is unstable; restless, and moody; is insecure about his status; is self-centered; tries to be sophisticated; enjoys excitement; has difficulty balancing his time; may ignore adult assistance in planning; has a short attention span and is easily distracted—interests are short lived; likes to manipulate mechanical objects; extends his capacity to think and reason; uses excess energy in mental illusions; begins to think about economic independence; may handle money in buying some of his clothes; develops standards, ideals, and a sense of duty; grows in leadership qualities; plans ahead for the future.

Social Growth

The eighth grader

is interested in social problems; takes intermittent pride in his personal appearance; desires attention; may not be tolerant of others; likes new experiences; is daring and boisterous; enjoys new records and loud music; wants all the pleasures and comforts of life, without working for it; likes being secretive; expresses his own personality and is somewhat individualistic; yet, wants to be like others; is both serious and casual; joins cliques, clubs, gangs, and other organized groups; desires group approval; is loyal to the group and seeks identification with the group; wants companionship of his own age group; wants to be popular; chooses a particular friend; shows an awareness and interest for the opposite sex; has frequent crushes; may fall in love; participates in informal social activities with the opposite sex; wants to be considered an adult by his peers; depends on parental interest, but often rejects their affection; seeks greater independence.
from his family; starts home responsibilities but does not finish them; has many varied interests which change frequently; is usually cooperative with those outside his family; admires his teacher; dramatizes roles to find status; copies less desirable adult behavior; displays fads; dislikes teasing.  

Certain differences in the physical growth characteristics of eighth grade boys and girls were discussed earlier. Socially, certain differences are observable also. Girls begin to show an interest in the opposite sex about a year earlier than do boys. This difference in the age of sex maturation creates difficulties in social adjustments. Adjustment problems are apparent at school, therefore, it is important that the teacher know his pupils well. The teacher will recognize that not only do boys and girls vary in growth patterns, but boys within the eighth grade will vary in their rates and patterns of growth, as will girls. Thus growth is a very complex subject and needs to be studied carefully by teachers and curriculum builders.

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Needs Associated with Growth Characteristics

The degree to which a thirteen-year-old has matured is indicated by his individual growth characteristics. These characteristics relate to the needs of the individual boy or girl. Needs are strong individual tensions that have a compulsion to be released. The curriculum builder must consider needs as clues to pupil concerns in health.

Developmental Tasks

Havighurst, speaking of needs as developmental tasks, writes:

A developmental task is a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval of the society, and difficulty with later tasks.\(^5\)

In order to explain the full meaning of a developmental task, one task unique to the adolescent, that of achieving emotional independence from parents and other adults, has been illustrated. The adolescent does not want to be treated as a child; instead, he wants to love his parents and to respect other adults without being independent. Biologically, his wants seem to be related to the fact that he cannot find sexual satisfaction within the home; therefore, he develops emotional ties with his own agemates.\(^6\) Psychologically,

\(^5\)Robert J. Havighurst, *Developmental Tasks and Education*, p. 2.

\(^6\)Ibid., p. 123.
thirteen-year-olds want to be independent; yet, at the same
time they want the continued security of parental protection.
Likewise, parents want their children to grow up; yet, they
are afraid that they will not know how to cope with the cold
cruel world. Culturally, social activities, recreational
habits, and mores change so rapidly that adults cannot keep
up with their children. Nevertheless, the adolescent,
especially in the middle-class American home, is obligated
to remain in a position of dependence longer than he would
like.

With each stage of development from infancy to old
age comes new developmental tasks. In addition to achieving
emotional independence from parents and other adults, there
are numerous other tasks new to the adolescent period, the
period from twelve to eighteen years. Havighurst lists them
as follows:

(1) Achieving new and more mature relations with
agemates of both sexes, (2) achieving a masculine
or feminine role, (3) accepting one's physique and
using the body effectively, (4) achieving emotional
independence of parents and other adults, (5)
achieving assurance of economic independence, (6)
selecting and preparing for an education, (7) pre-
paring for marriage and family life, (8) developing
intellectual skills and concepts necessary for
civic competence, (9) desiring and achieving
socially responsible behavior, (10) and acquiring a
set of values and an ethical system as a guide to
behavior.

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7 Ibid., p. 124.
8 Ibid., p. 125.
9 Ibid., pp. 33-71.
Though it is well established that each child grows according to his own pattern, his development follows a recognizable sequence, and growth patterns are enough alike to suggest the types of problems with which a large percentage of children in certain age groups will be concerned. As these tasks have a biological, psychological and cultural basis, they are valuable clues to the health needs and interests of children.

**Persistent Life Situations**

Stratemeyer refers to needs as persistent life situations. She believes that the everyday concerns of the pupil should determine the starting point of learning. These concerns should be viewed coordinately with the needs and values of society in curriculum planning. Persistent life situations are those situations that reoccur in the life of the individual in many different ways as he grows from infancy to maturity.\(^\text{10}\)

Throughout life, people face persistent life situations in many areas of living. What are the persistent life situations that reoccur throughout life in the area of health? Stratemeyer defines these situations as follows:

**Persistent Life Situations**

**Situations Calling for Growth in Individual Capacities**

A. Satisfying Physiological Needs—meeting food needs, meeting needs for air and light,

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\(^{10}\)Florence B. Stratemeyer, *et al.*, *Developing a Curriculum for Modern Living*, p. 115.
maintaining comfortable body temperature, securing needed rest and activity, meeting sex needs, [and] getting rid of body wastes.

B. Satisfying Emotional and Social Needs—securing secure relations with others, making constructive use of emotions, [and] achieving self-direction.

C. Avoiding and Caring for Illness and Injury—avoiding illness, avoiding accidents, caring for physical defects, [and] caring for illness or injury.\(^\text{11}\)

A study of the persistent life situations occurring in the area of health aided the Curriculum Guide Committee in determining health needs.

**Interests Associated with Growth Characteristics**

As was stated earlier, growth characteristics relate to needs. Likewise, growth characteristics relate to the interests of boys and girls. Interests are defined as sources of spontaneous and outspoken curiosity about problems. The health interests of boys and girls must not be ignored as guideposts in the selection of health problems. Therefore, the famous Denver Study of 1947 was reviewed. This study, undertaken by the Denver Public Schools, was entitled *Health Interests of Children*.

The report discusses the health interests of boys and girls at all grade levels. The committee, however, focused its attention on the health interests of 1,200 eighth grade boys and girls participating in the study. The major health

\(^\text{11}\)Ibid., pp. 155-57.
interests of eighth grade boys and girls, as summarized by the Denver Study, are

(1) caring for eyes, (2) participating in the developing and use of community facilities for recreation, (3) appreciating the conquest of disease, (4) knowing some of the basic food requirements of the body, (5) understanding the effect of food on the body, (6) relaxing through hobbies, (7) selecting suitable and attractive clothing, (8) caring for good grooming (girls), (9) caring for the skin (girls), (10) developing self-confidence and poise, (11) getting along with own group, (12) making adjustments to the family, (13) recognizing symptoms and caring for injuries, (14) waiting on a sick person, and (15) becoming acquainted with possible careers in the field of health.12

Summary

The Curriculum Guide Committee studied the growth characteristics, the health needs, and the health interests of the early adolescent as discussed earlier in this chapter. It concluded that not only are needs and interests associated with growth characteristics, but they are also associated with health problems. The committee's study of adolescent health needs and interests suggested the following health problems:

1. How can I learn to balance my time?
2. How does one solve problems?
3. How can I learn how to study effectively?
4. Why am I superstitious?

12Health Interests of Children, Denver Public Schools, pp. 69-72.
5. How can I earn my own money?
6. Why am I easily distracted when working?
7. How can I improve my health?
8. What should I expect when I have a health examination?
9. Why am I ill frequently?
10. What physical defects do I need to have corrected?
11. How can I best care for my eyes?
12. How does one select a balanced meal?
13. How does food effect my body?
14. Why should I have difficulty getting rid of body wastes?
15. How can I participate in the development and use of community facilities for recreation?
16. How can I learn a new hobby?
17. Why do I need to participate in more outdoor activities?
18. Why do I tire easily?
19. How much sleep should I have each night?
20. Where can I receive help in learning to select my own clothes?
21. How can I learn to be well groomed?
22. What can I do about perspiration odors?
23. How can I get my parents to allow me to buy my own clothes?
24. What can I do about skin allergies and disorders?
25. How can I improve my personal appearance?
26. How does one develop self-confidence and poise?
27. Why am I afraid to join in group discussions?
28. How can I learn to plan with a committee?

29. How does one learn to be fair when arguing with others?

30. How does one develop a personal philosophy?

31. Why do I fear failure?

32. How can I become a better leader?

33. How can I be more popular?

34. How does one find a close friend?

35. Should I be interested in the opposite sex?

36. How can I achieve more independence?

37. How can I learn to cooperate with my family?

38. How can I learn to accept teasing?

39. Why do I lose my temper easily?

40. How can I learn how to get along with my own age group?

41. Why should I feel self-conscious about my physical appearance?

42. Why am I growing unevenly? (My features are out of proportion.)

43. How can I obtain information about sex?

44. What changes take place in my body when I develop into a man?

45. What changes take place in my body when I develop into a woman?

46. How can I gain weight?

47. How can I lose weight?

48. Should I feel self-conscious because I am taller than my friends?

49. Should I feel self-conscious because I am shorter than my friends?
50. Where can I learn more about diseases?

51. Who are some of the great men and women who have contributed to the field of science?

52. How can I avoid accidents?

53. How does one give first aid?

54. How does one care for the sick?

55. How has disease been conquered?

56. How can I be a success in life?

57. Who can help me to plan ahead for the future?

58. Where can I obtain information about health careers?

There problems are suggestive of the following broad problem areas: solving my problems; appraising my health; seeing; food and nutrition; recreation, rest and sleep; personal grooming; living with others; personality development; understanding normal physical growth, height and weight; diseases; safety; care of the sick; contributions of great men and women in science; and careers in health science.
CHAPTER VI

SECURING JUDGMENTS OF ADMINISTRATORS, TEACHERS, NURSES, COUNSELORS, PARENTS, AND HEALTH AUTHORITIES

The fifth research step was to secure advice, regarding the selection of health problem areas and suggestions for construction of the guide, from administrators, teachers, nurses, counselors, parents, and health authorities. Staff meetings involving school personnel, meetings involving parent consultants, and conferences involving health authorities were arranged.

Staff Meetings with Administrators, Teachers, Nurses, and Counselors

Columbus junior high school administrators, health science teachers, nurses, and counselors were contacted before school was dismissed in June of 1957. Sixteen meetings, one at each junior high school, were scheduled. At least one member of the Curriculum Guide Committee presided at each meeting. The purpose of these meetings was to acquaint staff members with the curriculum guide project and to confer with these professional workers about the health problems common to eighth grade boys and girls.
Meetings with Parent Consultants

A city-wide Parent Consultant Committee, consisting of a health representative from each of the junior high school parent-teacher associations, was organized in July of 1957. These representatives were interested in health and, for the most part, had had special training and/or experience in the field of health. During the 1957-1958 school year, each of these representatives would have a son or a daughter in the eighth grade health science course.

At the first committee meeting, the health representatives were informed about the research project in health science. They were told that this committee would assist in identifying pupil health problems and community resources for health and would serve in an advisory capacity on controversial areas of health instruction.

Conferences with Health Authorities

Small informal conferences with health education authorities were arranged during late July. Authorities from the Ohio State University and from the Ohio Department of Education, as well as members of the Curriculum Guide Committee, attended these conferences. The health problem areas selected by the Curriculum Guide Committee as a result of their research findings were presented to the authorities for constructive criticisms. (These health problem areas will be identified and supported in Chapter VII.)
Summary

The results of the meetings and conferences discussed in this chapter, were as follows. Administrators, teachers, nurses, and counselors believed that eighth grade boys and girls had many common health problems and that these problems could be grouped into important problem areas. These areas were interpreting advertising; learning how to study; appraising their health; conserving human resources—seeing, hearing, speaking; caring for their teeth; making a good appearance; displaying good manners; making friends; getting along with the opposite sex; living harmoniously with their family; respecting older people; eating for good health; participating in wholesome recreation; relaxing, resting, and sleeping; living in a healthful and safe environment—identifying health organizations that help to make our city a safe place in which to live; achieving good mental health; avoiding diseases, avoiding accidents; learning what to do when an emergency occurs; caring for the sick; avoiding harmful drugs; understanding normal human growth—especially the acquiring of secondary sex characteristics; learning about heredity; appreciating the importance of plants and animals to our health; and planning a career.

Members of the Parent Consultant Committee identified over five hundred health problems common to the thirteen-year-old. The majority of these problems could be brought together into five problem areas: social health, height and
weight, seeing and hearing, learning to study, and personal appearance. The parent health representatives supported the teaching of human reproduction and venereal diseases in the health science course.

Health authorities reacted favorably to the list of health problem areas suggested by the Curriculum Guide Committee. Authorities from the Ohio Department of Education pointed out that the Curriculum Guide Committee must consider the legal requirements for teaching about safety, alcohol, and narcotics. Authorities from the Ohio State University recommended that the sequence of the problem areas be rearranged. These proposals were accepted by the committee.
CHAPTER VII

SELECTING PROBLEM AREAS

A situation that causes some anxiety and for which there is no ready answer is a problem. The solution to a problem requires research and thinking. When the problem proposed for solution or consideration relates to health, it is a health problem. A series of problems relating to one area of personal and/or community health compose a health problem area. When one or more of these problem areas are grouped together, a unit is formed and is given a unit title.

As the sixth research procedure, the Curriculum Guide Committee arranged problem areas under selected unit titles. The committee's selection of problem areas was based on evidence gathered from the first, second, fourth, and fifth research steps completed earlier in the study. The third step, the development of the aim and objectives of the guide, is not included because it did not relate directly to the selection of problem areas. These developmental and research steps are described in the following pages: step one, an analysis of the present program, pp. 16 to 24, step two, the collection and review of pertinent literature, pp. 25 to 35, step four, the identification of needs and interests of pupils, pp. 40 to 52, and step five, the securing of judgments.
of administrators, teachers, nurses, and counselors, pp. 53 to 56. Evidence from these steps are interpreted to support the selection of problem areas within each unit.

**Discussion of Problem Areas Within Each Unit**

**Unit:** I. Solving My Problems

**Problem Areas:**
- A. Avoiding Problems
- B. Scientific Thinking
- C. Experimentation
- D. Being an Intelligent Consumer

This unit was developed as a result of findings arrived at in research steps four and five. Growth characteristics, needs, and interests of the adolescent indicate that he should receive assistance in solving his problems. One problem common to most eighth grade boys and girls is that of discovering an efficient way to study. Members of the Parent Consultant Committee strongly recommended that pupils receive help in learning to study. These parents agreed that effective study habits contribute to good mental health and that ineffective study habits result in poor mental health. Since the adolescent is somewhat gullible, he must learn to distinguish between the methods of a charlatan and the methods of a scientist. Administrators, teachers, nurses, and counselors believed that thirteen-year-olds have difficulty interpreting advertising, and that because they are beginning to earn and spend their own money, they should understand the role of an intelligent consumer.
II. Appraising My Health

Problem Area: Health Appraisals

This unit is supported by the findings obtained from research steps two, four, and five. Health authorities, curriculum builders, textbook writers, administrators, teachers, nurses, and counselors stated that it is important that health be appraised at all periods in life. The adolescent period is no exception. Growth characteristics show that, although he is usually in good health, the early adolescent worries about his health. Adolescent boys and girls have minor physical defects the correcting of which may present major health problems. They are growing rapidly and they are concerned about the normality of the physical changes that are occurring in their bodies.

III. Seeing and Hearing

Problem Areas: A. Vision and Vision Screening B. Hearing and Hearing Screening

Curriculum Guide Committee members believed that they were justified in establishing this unit because of the evidence obtained from research steps two, four, and five. Textbook writers provided information about the special senses. Administrators, teachers, nurses, and counselors felt that boys and girls must be taught to conserve human resources. The Parent Consultant Committee regarded seeing and hearing as a vital problem. Eighth grade boys and girls are interested in learning how they can best care for their eyes. Two of their most valuable resources are their eyes and their ears.
All three problem areas in this unit are well supported by evidence from research steps two, four, and five. Administrators, nurses, counselors, teachers, health authorities, curriculum builders, and textbook writers agreed on the importance of these problem areas. Materials relating to "Eating for Good Health" were included most frequently in publications by curriculum builders and by textbook writers.

Although the first research step revealed that "Foods and Nutrition" is taught in home economics, the Curriculum Guide Committee believed that this general problem area should nevertheless be an integral part of the health science course, especially since very few, if any, boys are enrolled in home economics. Also, the material related to nutrition is voluminous and only a few basic aspects would need to be duplicated in both courses. In home economics special attention is being placed on the use of laboratory equipment and on the preparation of simple foods, whereas in health science the emphasis would be on knowing how to select a balanced meal and on learning how foods effects our bodies. The adolescent is experiencing a rapid growth spurt and both boys and girls consequently need to follow a basic food plan and to eat a variety of foods containing such essential nutrients as protein, calcium, and Vitamin D. At this time
of intense growth, the nutritional requirements of eighth
graders are high. Because boys are more active than girls,
their nutritional needs are greater. Girls, however, may
not eat the right foods because they go on crazy diets to
lose weight. When a thirteen-year-old does not get enough
calories, the result is less activity and slowed growth.

In the first research step it was also discovered that
in the self-contained classroom, time is devoted to the study
of recreation. However, it should be noted that emphasis is
given to family recreation and to criteria for recreational
activity selection, whereas in health science the emphasis
would be placed on the use of available facilities for
recreation in Columbus. Consideration should be given to the
fact that pupils like to participate in the development and
use of community facilities for recreation. They want to
learn new recreational hobbies.

Since growth characteristics indicate that the adoles-
cent tires easily and needs more sleep than he receives, the
Curriculum Guide Committee recommended that pupils study the
causes of fatigue and the need for rest and sleep.

Unit: V. Making a Good Impression

Problem Areas:  
A. Cleanliness of Skin  
B. Do Your Hands and Finger Nails Tell about You?  
C. Your Hair  
D. Your Teeth  
E. Is Yours "A Voice to Remember"?  
F. Your Silhouette  
G. How to be Well Dressed
The second, fourth, and fifth research steps pointed out the importance of this unit. Administrators, teachers, nurses, and counselors stated that pupils needed assistance in improving their appearance. They made special reference to the quality of a pleasant voice and to the value of an attractive smile and teeth. Parents felt that eighth grade boys and girls want to make a good impression but that they do not always know how to do this. Health authorities, curriculum builders, and textbook writers frequently discussed personal hygiene, emphasizing the dental health aspect. Pupils are interested in selecting and buying their own clothes. Girls, especially, want to learn how to be well groomed. Skin allergies and disorders are common to the adolescent, and, as a result, the adolescent is concerned about his skin in relation to his appearance. Eighth graders must learn to accept their physique and use their bodies effectively. They must face reality and become proud, or at least tolerant, of their bodies. Boys and girls are concerned about how they look because society places so much emphasis on the importance of personal appearance.

Unit: VI. Living with Others

Problem Areas: A. Making Friends with Others
B. Boy-Girl Relationships
C. Family Living
D. My Relations with Older People
E. Group Relations

\[1\text{Havighurst, op. cit., p. 120.}\]
Findings from research steps two, four and five support the development of this unit. Pupils want to be popular and to have close friends. It is natural for adolescents to be interested in the opposite sex. They need to learn how to get along with members of their own group and how to cooperate with family members. Administrators, teachers, counselors, and nurses want boys and girls to display good manners, to respect older people, to develop friendships, and to live happily with their families. Parents believed that eighth graders need help in developing acceptable social conduct. They said, "Social health is as important as physical and emotional health." Health authorities, curriculum builders, and textbook writers verified the significance of teaching social health. Until now, the evidence in favor of this unit has been presented; however, the Curriculum Guide Committee took into account the findings revealed in the first research step of this study. They could not ignore the fact that aspects of social health were taught in home economics and in the self-contained classroom. However, two developmental tasks, achieving new and more mature relations with agemates of both sexes and achieving a masculine or feminine social role, pointed up more sharply the significance of a social health unit. Boys and girls are becoming adults and they need to look upon each other as adults.² Their

²Ibid., p. 111.
social relations with agemates are influenced by their degree of physical maturity, and social activities are more and more becoming an important part of their life. They try hard to obtain group approval. Boys need to accept the idea of becoming a man and girls the idea of becoming a woman. This task seems to be somewhat easier for boys in our society than for girls, who may be torn between the role of a wife and mother and a career.

Unit: VII. Growing-up Physically

Problem Areas:
A. Understanding Normal Growth
B. Acquiring Secondary Sex Characteristics
C. Checking Height and Weight

Research steps two, four, and five indicate the need for this unit. Eighth-grade boys and girls are self-conscious about their physical appearance. They are growing unevenly and their physical features may seem out of proportion. For example, their waist appears too long or their feet seem too big. Many of these adolescents lack scientific sex information. Owing to this lack, they may be embarrassed and fearful about developing into young men or women. They have difficulty accepting their bodies. Textbook writers discussed the structure and function of the body more frequently than any other aspect of health. This information helps boys and girls understand their bodies. Parents identified numerous

\[3\] Ibid., pp. 111-112.
questions that adolescents might ask about height and weight: for example, Do boys and girls grow at the same rate? How tall will I be? How much should I weigh? These adolescents may want to gain or lose weight. Many girls will want to be shorter than they are, while boys will want to be taller. Administrators, teachers, nurses, and counselors suggested that the early adolescent gain an understanding of normal physical growth and that he be introduced to the basic facts of heredity. Evidence from the first research procedure in this study tells us that in the self-contained classroom boys and girls may learn about some of the physical changes taking place during early adolescence. This aspect of health instruction cannot be left to chance, for if it is, adolescents are unlikely to be successful in achieving the developmental task of accepting their physique and using their body effectively, a developmental task which is unique to the adolescent stage of development.

Unit: VIII. Growing-up Emotionally

Problem Areas: A. Behavior as an Indication of Emotional Growth  
B. The Physiology of Emotions

Research steps two, four, and five helped the Curriculum Guide Committee to establish this unit. Administrators, teachers, counselors, and nurses believed that a concerted effort must be made to help boys and girls achieve good mental health. Health authorities, curriculum builders, and textbook writers placed mental health high on their list of
important content areas for health instruction. Eighth graders want to be independent, yet in many cases they have not shed their childish forms of behavior. They need help in developing self-confidence and poise. They need guidance in learning to accept responsibilities. They need to understand their emotions and how to control them. To be a success, they need to achieve emotional independence of parents and other adults.  

Unit: IX. Diseases and My Health

Problem Areas:  
A. Causes of Diseases  
B. Transmission and Recovery  
C. Control and Prevention  
D. Some Diseases Important to Me

Research steps two, four, and five indicated the need for this unit. Pupils are interested in learning about the conquest of disease. Personal illnesses, as well as illnesses of family members and of friends, magnify their curiosity about diseases. Health authorities, curriculum builders, and textbook writers considered the study of diseases very important. Diseases were the second most frequently discussed topic in the various publications analyzed in the second research step. Administrators, teachers, nurses, and counselors stated that the health science teacher should emphasize the prevention of disease. Pupils should be taught to appreciate the contributions of plants and animals in the fight against diseases.  

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See page 45 which describes this developmental task in detail.
Unit: X. Safe and Effective Living

Problem Areas: A. Emergency Care and First Aid  
B. Care of the Sick  
C. Facing Disasters

Research steps two, four, and five produced evidence for the selection of this unit. Health authorities told us that according to state law fire prevention must be taught. Administrators, teachers, counselors, and nurses wanted to teach boys and girls how to avoid accidents and what to do when a disaster strikes. Learning to live in a safe and healthful environment at home, at school, and in the community does not just happen. Eighth graders need to develop skills, habits, and attitudes, and need to possess the knowledge that will help them to act in a safe way. Adolescents are interested in learning to give first aid and to care for the sick. As a result of the first research step, it is known that time is devoted to first aid and to care of the sick in home economics; however, only girls receive this instruction. Safety was the most frequently discussed topic in the publications analyzed in research step two. Curriculum builders gave priority to information about safety and first aid. Accidents are the leading cause of death for this age group.

Unit: XI. Coping with Habit-forming Drugs

Problem Areas: A. Alcohol  
B. Narcotics

This unit was selected as a result of the findings from the second and fifth research steps. Administrators,
teachers, nurses, and counselors thought that boys and girls should be taught to avoid harmful drugs because of the effects these drugs have upon the human body. Ohio schools are required by law to teach about harmful drugs. Members of the Curriculum Guide Committee found that habit-forming substances were frequently discussed in health publications prepared by curriculum builders and textbook writers.

**Unit:** XII. **Columbus a Healthy City**

**Problem Areas:**

- A. Provisions for Community Health
- B. The Role of State and Federal Government in Community Health
- C. The Health of Columbus and Franklin County

Findings from the second and fifth research steps uphold the selection of this unit. Health authorities, curriculum builders, and textbook writers thought that community health information should be included in publications suitable for eighth graders. Administrators, teachers, counselors, and nurses strongly recommended that pupils understand the role of the federal, state, and local health organizations in helping to make Columbus a healthy and safe place in which to live. School personnel agreed that pupils should realize their responsibilities for helping to make Columbus a healthy city. One pupil responsibility would be to develop an awareness of the leading community health problems in Columbus and the surrounding area.
Unit: XIII. Science and Everyday Living

Problem Areas: A. Progress in Health Science since 1800  
B. Careers in Health Science

The fourth and fifth research steps support the selection of this unit. Pupil needs indicate that the adolescent fears failure. He wants very much to be a success in life. Consequently, he needs guidance in planning for the future. Selecting and preparing for an occupation is an important developmental task of the adolescent. He is very interested in learning about the contributions of great men and women in the field of health science and about careers in health science. Administrators, teachers, counselors, and nurses agreed that because the eighth grade pupil selects his high school courses while in this grade, he needs help in planning a career.

Summary

Some forty health problem areas were selected and arranged under thirteen unit titles by the Curriculum Guide Committee. The problem areas were included in the Health Science guide as a result of evidence secured from the research procedures indicated in Table 4, which follows.
### TABLE 4

**A SUMMARY OF RESEARCH STEPS INFLUENCING THE SELECTION OF PROBLEM AREAS IN EACH UNIT**

<table>
<thead>
<tr>
<th>Number</th>
<th>Unit Title</th>
<th>Research Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Solving My Problems</td>
<td>x x</td>
</tr>
<tr>
<td>II.</td>
<td>Appraising My Health</td>
<td>x x x</td>
</tr>
<tr>
<td>III.</td>
<td>Seeing and Hearing</td>
<td>x x x</td>
</tr>
<tr>
<td>IV.</td>
<td>Keeping Healthy and Efficient</td>
<td>x x x x</td>
</tr>
<tr>
<td>V.</td>
<td>Making a Good Impression</td>
<td>x x x</td>
</tr>
<tr>
<td>VI.</td>
<td>Living with Others</td>
<td>x x x x</td>
</tr>
<tr>
<td>VII.</td>
<td>Growing up Physically</td>
<td>x x x x</td>
</tr>
<tr>
<td>VIII.</td>
<td>Growing up Emotionally</td>
<td>x x x</td>
</tr>
<tr>
<td>IX.</td>
<td>Diseases and My Health</td>
<td>x x x</td>
</tr>
<tr>
<td>X.</td>
<td>Safe and Effective Living</td>
<td>x x x x</td>
</tr>
<tr>
<td>XI.</td>
<td>Coping with Habit-Forming Drugs</td>
<td>x x</td>
</tr>
<tr>
<td>XII.</td>
<td>Columbus a Healthy City</td>
<td>x x</td>
</tr>
<tr>
<td>XIII.</td>
<td>Science and Everyday Living</td>
<td>x x</td>
</tr>
</tbody>
</table>

The Curriculum Guide Committee concluded that all learning in health education is continual and that it should take place through direct, correlated, and integrated teaching at all grade levels. The fact that a problem area concerned with nutrition, care of the sick, or recreation was taught in another subject at another time in the child's school life does not necessarily mean that that problem area
should be omitted in the health science course. Problem areas do not vary greatly from grade to grade. However, the problems taught within a problem area do vary from school to school, from grade to grade, and from class to class.

The thirteen units identified in this chapter must be developed into resource units for the Health Science guide. These resource units are arranged in what seems to be a logical sequence to the committee. However, in each section of the health science course the sequence of units and the selection of problem areas within units will depend on the judgment of the health science teacher and his pupils.
CHAPTER VIII

SURVEYING AND SCREENING AVAILABLE RESOURCES

As the seventh procedure in the development of the Health Science guide, available health resources relating to selected health problem areas were surveyed and screened. The Curriculum Guide Committee completed this task during the summer of 1957.

Health resources, for the purposes of this research project, are materials, persons, and organizations that can be drawn upon by the health science teacher to assist him and his pupils in their study of health science.

Surveying Resources

Health resources to be surveyed were classified by the Curriculum Guide Committee. The first classification is printed and graphic materials. These materials include booklets or pamphlets, handouts, leaflets, posters, and diagrams. With the assistance of the Director of Publications and Public Information of the Columbus Public Schools, these materials were defined in the following manner: booklet or pamphlet—a publication of a few sheets of printed matter; handout—a publication consisting of one sheet about 4" x 6" in size; leaflet—a publication of one or more pages which
may be folded, but not stitched or fastened; small poster or diagram—a relatively small printed or mimeographed card of paper not larger than notebook size, often illustrated; large poster or diagram—a relatively large printed or mimeographed card or sheet of paper larger than 8 1/2" x 11", often illustrated.

The second classification consists of audio-visual materials. These materials include audio-visual equipment, films, filmstrips, demonstrations, exhibits, models, recordings, radio and television programs, and other special loan items.

The third classification is resource persons. The resource participant visits and takes part in classroom activities, while the resource consultant gives professional or technical advice to the teacher but does not take part in classroom activities.

The fourth and last classification is visitations. Individual pupils or small groups of pupils, not to exceed four, can plan visits to certain designated places in the schools and in the community. In other situations, visits or field trips within the community can be arranged for one or more classes.

Organizations providing health resources were identified and grouped under three resource headings: school and central office, community, and out-of-town resources.
School and Central Office Resources

Resources available within the Columbus Public School System were called school and central office resources. (The central office houses the Board of Education and the administrative offices of the Columbus Public Schools.) The school system was the first organization surveyed by members of the Curriculum Guide Committee. They interviewed the director, assistant director, or supervisor of each special service department at the central office. (A department is a separate subdivision or branch of an organization.) Curriculum Guide Committee members learned from the department heads in what way each junior high school might assist the health science teacher. Also, the committee discovered that eight departments at the central office provide the teacher with health resources of one kind or another. The names of these departments follow:

1. Department of Child Study and Student Counseling
2. Department of Physical, Health, and Safety Education
3. Department of Health Service
4. Department of Pupil Personnel
5. Department of Radio and Audio-Visual Education
6. Department of School Libraries
7. Department of School Lunchrooms
8. Department of Special Education

Community Resources

Many health resources are available within metropolitan Columbus. These are resources exclusive from those found in the schools. The Parent Consultant Committee helped the Curriculum Guide Committee to list the names of specific
organizations interested in promoting health. Next, the Curriculum Guide Committee obtained the addresses and phone numbers of these community organizations. Representatives of these organizations were phoned and personal interviews were arranged. At the interview meetings the health science research project was explained. The kinds of resources described on pages 72-73 of this chapter were defined and the representatives were asked if their organization could assist by providing health classes with any of these resources. Sample printed, graphic, and audio-visual materials were picked up at the time of the interview. Later, these materials were screened at the central office. The following sixty-one different health organizations were surveyed:

Alcoholic Anonymous  
American Cancer Society  
American Red Cross  
Armour and Company  
Aurora Association  
Borden's Milk Products  
Central Hospital Service  
Central Ohio Heart Association  
Columbus Association for the Blind  
Columbus and Southern Ohio Electric Company  
Columbus Automobile Club  
Columbus Dental Society  
Columbus Filtration Plant  
Columbus Fire and Emergency Squads Public Relations Bureau  
Columbus Health Department  
Columbus Hearing Society  
Columbus Metropolitan Parks  
Columbus Police Department  
Traffic Safety Education Bureau  
Columbus Public Library  
Columbus Recreation Department  
Dairy Council  
F & R Lazarus & Company  
Franklin County Chapter of the National Foundation for Infantile Paralysis  
Franklin County Mental Health Association  
Gabel Dairy  
Herman Falter Packing Company  
John Hancock Insurance Company  
Juvenile Court  
Metropolitan Health Council of Columbus and Franklin County  
Metropolitan Life Insurance Company  
Nationwide Insurance  
Ohio Bell Telephone Company  
Ohio Civil Defense Corps
Out-of-Town Resources

A selected number of health resources outside metropolitan Columbus were also surveyed. The State Supervisor of Health Education and Civil Defense gave the Curriculum Guide Committee the names of organizations in Ohio and in other states in the United States that offer educational health materials. Committee members wrote letters to these out-of-town organizations, asking if sample copies of their printed and graphic health materials might be sent to the central office. Members inquired about the availability of audio-visual materials from these groups. Since Columbus is rich
in health resources, it was not necessary to identify too many out-of-town resources. In fact, only the following fifteen out-of-town resources were surveyed:

- American Institute of Baking
- Birk and Company, Inc., Publishers
- Bristol Meyers Products Division
- Connecticut State Medical Society
- Equitable Life Assurance Society of the United States
- General Motors Corporation
- Public Relations Staff—Film Library
- Kimberly-Clark Corporation
- Lumbermens Mutual Casualty Company
- National Association for Mental Health
- National Education Association
- Procter and Gamble
- Prudential Insurance Company of America
- Sonotone Corporation
- Travelers Insurance Company
- Wheat Flour Institute

**Screening Resources**

The next task was to screen the printed, graphic, and audio-visual materials. An abundance of this type of health materials had been assembled by the Curriculum Guide Committee at the central office and committee members had to exercise great care in selecting the best resource materials.

**Printed and Graphic Materials**

The Curriculum Guide Committee decided to create a Health Screening Committee to assist with the important task of screening printed and graphic materials. This screening committee consisted of the Curriculum Guide Committee and these additional members: the Supervisor of Health Education and Civil Defense of the State Department of Education, the Supervisor of Nurses of the Columbus Public Schools, the
Assistant Superintendent in Charge of Instruction of the Columbus Public Schools, and a Professor of Physical Education of the Ohio State University.

The screening committee established the following criteria for selecting printed and graphic material.

1. Is the material scientifically accurate and up to date?
2. Does the material have exceptional educational value?
3. Does the material make only inconspicuous mention of the sponsoring agent?
4. Does the material relate to the defined problem areas? (These problem areas were identified in Chapter VII.)
5. Is the material appropriate and interesting to the adolescent boy and/or girl?
6. Will the material be helpful to the teacher?

After the 193 printed and graphic materials had been selected, a copy of each of the materials was placed in either a resource folder or a tube. These resource materials were distributed to teachers with the first draft of the guide when it was completed.

Audio-Visual Materials

The Curriculum Guide Committee assumed the full responsibility for screening the audio-visual materials. The criteria established by the Health Screening Committee
for the selection of printed and graphic materials were used also in selecting 241 audio-visual materials.

Resource People and Visitations

Resource people were selected as the result of personal interviews arranged by a member of the Curriculum Guide Committee. The selection was based on two factors, one, the committee member's observation of the individual, and, two, the willingness of the individual to serve as a resource person. This question was usually considered in making a selection: How effective would this person be in an eighth grade health science classroom?

Visits were suggested in the guide when they related to a problem area or areas to be included in the guide, when organizations agreed that visits would be possible, and when it seemed that the particular visit would be of interest and of educational value to the pupil.

Summary

The health resources selected by the committees were compiled. Three separate resource divisions were set-up: school and central office, community, and out-of-town resources. Each organization or department within an organization providing health resources was alphabetically listed. Under each, the health resources appropriate for use in
health science classes were catalogued. Several examples follow:

**Division:** School and Central Office Resources  
**Organization:** Columbus Public Schools  
**Department:** Radio and Audio-Visual Education

Audio-Visual Service Provided by the Central Office

The Department of Radio and Audio-Visual Education helps teachers enrich the learning experiences of pupils. Some of the specific ways in which this department may help you plan your health-science class are as follows:

1. The catalog entitled "Audio-Visual Aids" lists films and filmstrips relating to health-science units which are available in the Department. These films and filmstrips are listed in each unit as they relate to course content. You will be able to distinguish filmstrips from films by the fact that all filmstrips have a letter preceding the number.

2. Some gifted pupils may be encouraged to visit the Department of Radio and Audio-Visual Education and to preview new films and filmstrips. Teachers are always welcome to preview materials at the administrative offices as well as in their own buildings.

3. Models may be borrowed for a one week period. The following models are available:

   The Digestive System  The Heart  
   The Ear  The Heart and Lungs  
   The Eyeball

4. The radio series entitled "Adventures in Research," broadcast over Radio Station WCBE, will contain a number of programs that will be usable in the health-science course. For example, transcriptions such as "Dr. Harvey Cushing" (his contributions to improved brain surgery techniques), "The Purple Vapor" (the story of the discovery of iodine), "The Reducing Cows" (the story of the discovery
of Vitamins A, B, C, and D), and others can be correlated with given units of work. During the school year, you will receive a teacher's manual giving descriptions of and details about these programs.

Audio-Visual Services Provided by Your School

1. Each junior high school has a coordinator of audio-visual materials. Particularly if you are a new teacher, ask this person about school radio and audio-visual policies and procedures.

2. Every junior high school should have a tape recorder, a movie projector, and a filmstrip projector.

3. Your audio-visual coordinator will teach you how to operate the film projector and the movie projector.

4. Most junior high schools have a student projector crew. This crew shows films for classes or for special occasions.

5. Every school is equipped to receive radio programs.

Division: Community Resources

Organization: City of Columbus

Department: Columbus Recreation Department

PRINTED AND GRAPHIC MATERIALS

Booklets and Pamphlets

Beatty Recreation Center
Eleventh Avenue Recreation Center
Linden Recreation Center
Poindexter Recreation Center
Sunshine Recreation Center

Leaflets

Columbus Recreation Department
Whetstone Recreation Center
AUDIO-VISUAL MATERIALS

Film

"A Chance to Play" (24 minutes)
The story of what a community did to extend opportunities for recreation.

Special Loan Items

Picnic Kits
A standard picnic kit consisting of horseshoes, softballs, bats, and volleyball and volleyball nets may be secured. Special kits containing items specified by you are also available upon request. A $10.00 deposit is necessary for any kit. This money is refunded in full when the kit is returned. These are particularly useful for family picnics and group outings.

RESOURCE PARTICIPANTS

Miss Dorothy Jones
Mr. Jerry Fedderson
Recreation Supervisors

OPPORTUNITY FOR COMMUNITY VISITATION

Individual or Small Group Visitations
Headquarters for city recreational facilities are City Hall, Room 124.
Classes are welcome to visit the community recreation centers of the Columbus Recreation Department

Beatty Center
247 North Ohio Avenue
CL 3-1555

Glenwood Center
1925 West Broad Street
BR 4-7416

Linden Center
1254 Briarwood Avenue
AM 7-3226

Poindexter Center
240 North Champion Avenue
CL 2-9646

Schiller Center
Deshler and Jaeger Streets
HI 4-7262

Sullivant Gardens Center
590 Van Buren Drive
CA 4-6937

Sunshine Center
Sullivant and Sandusky Sts.
CA 4-9560

Whetstone Center
3923 North High Street
AM 7-3888
SPECIAL PROGRAMS AND ACTIVITIES

Activities offered in our center and playground programs which would interest 13-year-old boys and girls are as follows:

<table>
<thead>
<tr>
<th>Arts</th>
<th>Horseshoes</th>
<th>Table Games</th>
</tr>
</thead>
<tbody>
<tr>
<td>Badminton</td>
<td>Leadership Clubs</td>
<td>Table Tennis</td>
</tr>
<tr>
<td>Baseball</td>
<td>Modern Dancing</td>
<td>Teenage Clubs</td>
</tr>
<tr>
<td>Basketball</td>
<td>Physical Fitness</td>
<td>Tennis</td>
</tr>
<tr>
<td>Bowling</td>
<td>Self Improvement</td>
<td>Touch Football</td>
</tr>
<tr>
<td>Boxing</td>
<td>Soccer</td>
<td>Track and Field</td>
</tr>
<tr>
<td>Cooking</td>
<td>Social Dancing</td>
<td>Tumbling</td>
</tr>
<tr>
<td>Fishing</td>
<td>Softball</td>
<td>Volleyball</td>
</tr>
<tr>
<td>Folk Dancing</td>
<td>Shuffleboard</td>
<td>Weight Lifting</td>
</tr>
<tr>
<td>Football</td>
<td>Square Dancing</td>
<td>Woodworking</td>
</tr>
<tr>
<td>Group Games</td>
<td>Swimming</td>
<td>Wrestling</td>
</tr>
</tbody>
</table>

Division: Out-of-Town Resources

Organization: National Education Association

PRINTED AND GRAPHIC MATERIALS

Booklet

Learning to Use Advertising

Over 450 pieces of printed and graphic materials and over 300 audio-visual materials were screened. A total of 119 typewritten pages of health resources were arranged in a resource directory, which was later placed in the Health Science guide. Within the directory, an explanation of how the resources were selected and who selected them is given. Suggestions for using each of the resources are included also. The Columbus Public School System and the community at large have so many useful health resources that most of the needs of health science teachers can be met at the local level. Because of this fact, only 41 out-of-town resource materials, in contrast to 393 in-town resource materials, are included in the guide.
CHAPTER IX

ORGANIZING THE RESOURCE UNIT

In Chapter VII the selection of unit areas was described. This procedure had to be completed before the Curriculum Guide Committee could survey intelligently health resources. With problem areas determined and resources carefully screened the task of constructing resource units could be undertaken. A resource unit is prepared for use by teachers and not by pupils; covers a broad area rather than a specific topic or problem; contains much more material than can be used by one class; and suggests a variety of possibilities for achieving the same goals.¹

The organization of the resource unit was the eighth step in the development of the guide. This chapter describes the organization of the resource unit and discusses the selection and arrangement of information included within it. To help clarify this discussion, many illustrations are drawn from the units. One complete unit, "Appraising My Health," can be found in Appendix A, pp. 162-170.

The Curriculum Guide Committee determined the format for the resource units. In selecting a format, the courses of study, syllabuses, and resource units collected and described in Chapter III were analyzed. The Director of Publications and Public Information of the Columbus Public Schools advised the Curriculum Guide Committee regarding the style. As a result, the resource units in the Health Science guide use the following organization.

**Title Page**

The title page carries the resource unit number and the title of the unit in bold type. The title page is blue, while the remainder of the unit is on white paper. The blue title page serves a definite purpose in that it assists the teacher in locating the units.

**Introductory Page**

This page is divided into three parts—introduction, objectives, and suggestions to the teacher. Each part helps to introduce the new unit.

**Introduction**

A general statement orients the teacher to the unit and defines the significance of the area or areas to be studied. This statement is sometimes a quotation from a health authority. More often an outstanding teacher has
written the introductory statement. The unit "Living with Others," for example, begins as follows:

As the child grows he begins to learn the responsibilities of living with others. Unfortunately some individuals remain social misfits, unable to assume a place in their family and in their community. To get along with others requires understanding, cooperation, sincerity, and interest in and love for one's fellowmen. These qualities are not acquired automatically; they are learned and experienced as one becomes socially mature.

Objectives

Unit objectives are stated for the teacher. These objectives are grouped under three headings: attitudes, behavior (habits and skills), and knowledge. A statement of unit objectives is very important; however, any listing of objectives is only for teacher stimulation and thinking. As Ruth Byler says, "Specific teacher and pupil objectives can only be decided upon in the classroom." General teacher objectives for the unit, "Diseases and My Health" as stated by a member of the Curriculum Guide Committee appear below.

Attitudes
To develop in the pupil the attitude that much can be done through personal and community effort to reduce the incidence of disease.

Behavior (habits and skills)
To establish specific habits and skills which will keep the pupil free from disease and will enable him to maintain his optimum health status.

2 Toward Better Health Education for Connecticut Youth, p. 15.
Knowledge

To achieve an understanding of how to prevent and control the communicable, chronic, and degenerative diseases that may affect a pupil's behavior and health.

Note also the objectives for the "Appraising My Health" unit on p. 162.

Suggestions to the Teacher

For the most part, suggestions to the teacher are unique for each unit. Having considered the suggestions, the teacher should be able to plan the unit more effectively. For example in the unit "Coping with Habit-Forming Drugs" the following teacher suggestions were given.

Present the material in this unit in an unemotional manner.
Become familiar with the scientific information in this unit, especially recent developments.
Newspaper and magazine articles about habit-forming drugs might be collected, studied, and entered in a section of the class scrapbook.
This unit should come late in the school year at a time when pupils are more mature.
Secure the Life Adjustment Booklets from the Department of Child Study and Student Counseling, Columbus Public Schools (CA 8-3821, Ext. 32) or from the Franklin County Mental Health Association (CA 8-1119).

The Body of the Resource Unit

The body of the resource unit consists of four essential elements called content, fact-finding, activities, and evaluation. Each part is arranged in column form. The content and fact-finding columns are placed on left hand pages and the activities and evaluation columns are located on right hand pages within the body of the resource unit. Each
column is allocated one-half of the page, running from top to bottom. The body of the resource unit has horizontal continuity in that each problem in the content column is numbered and the same number is used for the corresponding items in each of the other columns.

Content

The location of the content column can be readily seen by referring to the sample unit in the appendix. The content part of the resource unit has several subsections.

The first subsection is the introduction. Usually, a few brief statements serve as a preface to each specific problem area. Introductory notations many times are carried across the page into the fact-finding, activities, and evaluation parts of the resource unit. In the unit "Appraising My Health," introductory statements appear in several parts of the body of the resource unit (see pp. 163-170). In the unit "Solving My Problems," the problem area entitled "Being an Intelligent Consumer" is introduced by a member of the committee in this way:

Why is it difficult to be an intelligent consumer today? In our society, huge sums of money are spent by consumers each year on patent medicines, inferior cosmetics, reducing pills, health tonics and "Something-for-Nothing" schemes. Salesmen and businessmen often appeal to emotions to further the sale of their products. People buy things they do not need, often imposing a hardship upon themselves. Pupils should gain an understanding of how and why people are susceptible to such appeals.
Other introductory questions are stated in the activities column.

How will being a good thinker enable you to interpret advertising wisely? In what way will wise interpretation help you live a healthier and happier life?

The next subsection is the title of the problem area or areas. Some of the more lengthy resource units, for instance, "Living with Others," have five or more problem areas. Problem area titles within this unit are "Making Friends," "Boy-Girl Relationships," "Family Living," "Relations with Older People," and "Group Relations." On the other hand, other units such as "Appraising My Health" have only one problem area title. Usually, the shorter the unit, the fewer the problem areas.

The general make-up of instructional guides varies greatly. However, the content is usually organized in one of three ways: by topics, by problems, or by units.\(^3\) The majority of the health guides studied in Chapter III used the logical approach in presenting content. The Curriculum Guide Committee felt that to achieve the objective of encouraging the best and the most modern teaching methods the guide should have its resource units organized in a manner that would encourage the use of the psychological approach. Thus units were organized by problems based on the needs and interests of pupils.

\(^3\)Risk, op. cit., p. 270.
Emphasis is given to the solution of problems rather than to the storing up of information for possible use later. The details of anatomy, physiology, chemistry, and bacteriology are never taught per se.\textsuperscript{4} Science is used where it is necessary to explain a point.\textsuperscript{5} In the unit "Keeping Healthy and Efficient," one problem area, "Eating for Good Health," suggests twelve problems. The fact that twelve or more health problems appear within a given area does not imply that all must be covered. The resource unit should provide more problems than any one class can use. Then the teacher, with the help of his pupils, can select the problems within the unit that are to be studied. A teaching unit is an outgrowth of the resource unit and consists of the teacher's lesson plans for a given problem area.\textsuperscript{6}

Under each health problem, an \textbf{outline of facts} is presented. The problems and the outline of facts compose the substance or subject matter of each resource unit. The selection of subject matter was given careful consideration by the Curriculum Guide Committee. Subject matter was defined as those facts, items of information, rules, definitions, principles, generalizations, objects, or

\textsuperscript{4}Delbert Oberteuffer, \textit{School Health Education}, p. 71.
\textsuperscript{5}\textit{Ibid.}
\textsuperscript{6}Byler, \textit{op. cit.}, p. 14.
materials needed to attain the desired ends—correct attitudes, habits, skills, and knowledge in health science.\textsuperscript{8} Subject matter is what is used in discovering the truth and in solving a problem. One problem and answer from the unit "Seeing and Hearing" is reproduced here as an illustration of subject matter.

\begin{center}
\textbf{Content}
\end{center}

\textbf{A. VISION AND VISION SCREENING}

13. What are some intelligent suggestions to follow when watching television?

a. Always have a dim light on in the room.

b. Make sure that the light is not reflected on the screen.

c. Stay as far from your television screen as visual comfort permits.

d. Picture should be in clear focus. Blurred, snowy, and vibrating pictures place heavy strain upon the eyes.

e. Give eyes periodic rest intervals.

f. Viewing television from the floor fatigues neck muscles.

\textsuperscript{7}\textit{Risk, op. cit.,} p. 267.
Generally speaking subject matter is taught by one of two methods, either the authoritative or the developmental. In the former, the teacher is the authority and pupils dangle like puppets, handing back the information they have received. In the latter, pupils are guided by the teacher so that they may have certain experiences and so that they may reach certain objectives. The developmental method of teaching can be implemented in many different ways. Essentially, in the Health Science guide the problem-solving procedure carries into effect the developmental method.

The problem-solving procedure can be defined as a planned attack upon a difficulty or perplexity for the purpose of finding a satisfactory solution. "This involves the process of reflective thinking, not merely the accumulation of beliefs or the blind acceptance of facts just because someone in authority gives them to us." The Curriculum Guide Committee selected the problem-solving technique because it is based on the following accepted concepts and principles of modern education.

1. The problem-solving technique promotes democratic ways of behaving. This is evident when pupils and teachers
select problems together and when they work cooperatively in solving problems. Group problem-solving gives insight into the way men can and should arrive at conclusions concerning everyday problems. By such a procedure, pupils acquire attitudes of open-mindedness, tolerance, and fairness, and a desire to attack their problems in a scientific way.\(^{12}\)

To provide for individual differences, problem-solving can be planned so that the individual pupil solves his own problem. "The individual plan puts the pupil 'on his own,' that he may gain the independence and ability which he might fail to acquire under the group plan."\(^{13}\)

Teachers should use the problem-solving technique in planning with individual students as well as in planning with groups of students. Lindley J. Stiles, S. M. Corey and Walters S. Monroe express this idea quite well when they say,

Encouraging results obtained through the use of teacher-pupil planning suggest that a method which provides for adaption to individual differences, encourages student initiative, and stimulates individual and group responsibility and cooperative participation in a social climate which is characteristically democratic, is likely to be more effective than a method which does not.\(^{14}\)

2. The problem-solving technique is well suited to the maturity level of eighth grade pupils. Individual

\(^{12}\)Ibid., p. 462.

\(^{13}\)Ibid., p. 464.

\(^{14}\)"Methods of Teaching," Encyclopedia of Educational Research, p. 748.
problems can be solved because there are many problems in the content column of each unit from which to choose. These problems vary in difficulty and offer a challenge to pupils with different abilities, interests, and needs.

3. The problem-solving technique can be interesting and appealing to the pupils. It is sure to be if the problems selected are of immediate and personal concern to the pupil. Then the solution of a problem relates to the goals of the pupils. The earlier research steps of this study were undertaken to insure the selection of problem areas that were consistent with the goals of thirteen-year-olds.

4. The problem-solving technique utilizes the scientific method. Health is a way of living that involves the use of the scientific method. The first resource unit in the Health Science guide asks the question, "What is the right way to find answers to problems?" In this unit, the teacher demonstrates for the pupils the scientific method used in problem-solving. The teacher is concerned primarily in teaching the how of problem-solving through the demonstration of the problem-solving technique. The Curriculum Guide Committee suggests that the teacher use a problem common to most teenagers, such as, "What is the most efficient way to study?" Skills in problem solving should be taught in situations that are real in the life of the pupil to insure more
permanent learning. When the scientific method is applied to a problem, reflective thinking is used. Risk says,

... Reflective thinking is characterized by a process of careful, conscious consideration of facts, beliefs, or other items of mental experience for the purpose of arriving at rational conclusions about some problem or perplexity in the light of data bearing upon such problem or perplexity.

The pupil who has engaged in problem-solving situations should be better able to cope with problems influencing his health and the health of others. The problem-solving approach used in teaching health science lists the following steps to be followed in attacking a problem.

(a) **The problem is selected and defined.**

Teachers, with the assistance of their pupils, select a real life problem requiring thinking and research. The problem is stated. For example, "How does good lighting make homework easier?" "How can a counselor help us with our study problems?" "How does one prepare for a test?" The answers to these questions require reflective thinking and research.

(b) **Facts are collected and interpreted.**

The pupil gathers and organizes known facts and principles related to the problem. For the most

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part, these facts have been acquired from his past experiences. He may offer suggestions for solving the problem based on his imagination and creative thinking. Further investigations are made for the purpose of uncovering other pertinent facts related to the solution of the problem. All facts are analyzed and interpreted.

(c) **A tentative conclusion is reached.**
The pupil advances a hypothesis to the problem. The value in solving the problem is stated in writing and limitations are also recognized. The pupil may need technical assistance in drawing tentative conclusions. The type of assistance needed will depend on the nature of the problem.

(d) **The tentative conclusion is checked.**
The pupil verifies his results by checking each step in the problem-solving process. Actually, throughout the problem-solving process, the pupil evaluates his work and makes sure that he has selected the best solution to the problem.

(e) **A final decision is reached.**
No decision is ever final. However, for the present, the pupil reaches a final decision. He may consult his teacher or another adviser to review his final decision. In reaching this decision, the pupil should feel confident that
he has surveyed all important and available fact-finding resources.

(f) The pupil does something about his final decision.

"This step is basic if health teaching is to result in action, whether that action is increased understanding of or greater control over some life situation."17

5. The problem-solving technique is in harmony with the objectives of the total junior high school science program in the Columbus Public Schools. This is evident when one studies these broad science objectives, which are as follows (note particularly the third objective):

To develop understandings, knowledge, appreciations, attitudes, habits, and skills that represent the best in the scientific and democratic traditions.

To acquire the ability to think and act, control and select, more intelligently for everyday living.

To have first-hand experiences with the scientific method used in problem-solving and master methods of critical inquiry.

To attain a position of perspective on the place of science and scientific research in modern society.

To respect the accomplishments of great men and women who have contributed to scientific developments and progress and to view critically the opportunities for future careers in the field of science.18

17Ruth E. Grout, Health Teaching in Schools, p. 104.

6. The problem-solving technique is effective because it encourages the pupil to use first-hand experiences. In the unit "Appraising My Health" (displayed in Appendix A), it is suggested that a small committee of pupils visit a health service department, that a physician serve as a resource person, and that pupils have a health examination. These are all examples of first-hand experiences which should influence attitudes and behavior patterns.

Fact-Finding

The fact-finding part of the resource unit assists teachers and pupils in collecting data that relates to the problems suggested in the content column. Many of the fact-finding sources were discovered as a result of the health resource survey conducted earlier in this study. The community and out-of-town resources found in the fact-finding column of each resource unit are cross-referenced with the directory of health resources compiled as a result of the seventh research step. School and central office resources appear only in the fact-finding column of each resource unit.

Basic reading materials are listed in the fact-finding column, at the beginning of each new problem area. As many as four basic textbooks may be named. In certain resource units, the Life Adjustment Booklets from the Science Research Associates are suggested as basic readings.
Activities

Suggested activities are a very valuable part of a resource unit. Meaningful pupil activities definitely help to solve real health problems. A few of the purposeful types of activities suggested are demonstrations, experiments, field trips, surveys, interviews, debates, discussions, and role-playing. A sample activity suggestion from the unit "Seeing and Hearing" follows.

ACTIVITIES

A. VISION AND VISION SCREENING

16. Give all pupils the Snellen Screening Test. Supplies for the test may be secured from your school nurse. Eye screening should not give false security, since it measures only visual acuity.

Evaluation

This part of the resource unit offers suggestions for evaluation of pupil progress. It was a complex and difficult assignment for the committee to give suggestions that would effectively evaluate the objectives of each unit. Nevertheless, evaluative schemes are given continuously from the beginning to the end of each unit. Appraisal ideas correspond with the content, fact-finding, and activity ideas presented in the other columns. Near the end of each problem area, a "Vocabulary" list is provided in the evaluation
column. A pupil "Plan of Action" concludes the evaluation part of the resource unit. Oberteuffer says,

Action is the thing. To live healthfully, to practice what one knows, to do the scientific thing—that is the principal objective for which teaching exists. Behavior is more important than either knowledge or the elusive attitude because without the action the thought is impotent.19

Note the sample "Plan of Action" from the unit "Growing up Emotionally."

PLAN OF ACTION

What can you as an individual do to improve your emotional health?


2. React, but react favorably. Learn control. Control does not mean repressing your desires, but means directing basic desires into channels of behavior accepted by your social group.

3. Take advantage of opportunities provided in home, school, and community for developing favorable social graces, such as helpfulness, politeness, good appearance, and cheerfulness. These qualities make a person well liked by others. A person who is well liked by others develops confidence in himself.

Whitney says, "... each unit should include or should close with a logical summarization in order to further permanence of learning and certainty in delayed memory."20

19Oberteuffer, op. cit., p. 5.

20Frederick Lamson Whitney, The Elements of Research, p. 359.
Summary

The organization of the resource unit was discussed in detail in this chapter. The Curriculum Guide Committee selected this organization pattern only after they had reviewed the formats of curriculum materials collected as a result of the second research step and after consultation with the Director of Publications and Public Information. As previously mentioned, library research indicated that most health authorities advocated the psychological approach in the presentation of subject matter material, so content was arranged by problems with the hope that such an arrangement would encourage better teaching methods.

Finally, a format for the first draft of the resource unit was established. Descriptions and illustrations of the format helped to clarify unit organization. An outline of the resource unit format follows:

Outline of the Resource Unit Format

I. Title page
   A. Resource unit number
   B. Title of the resource unit

II. Introductory page
   A. Introduction
   B. Objectives
      1. Attitudes
      2. Behavior (habits and skills)
      3. Knowledge
   C. Suggestions to the teacher
III. Body of the resource unit

A. Content
   1. Introduction
   2. Title of problem area(s)
   3. Problems
   4. Outline of facts

B. Fact-Finding
   1. Introduction (sometimes)
   2. Fact-finding sources

C. Activities
   1. Introduction (sometimes)
   2. Suggested types of activities

D. Evaluation
   1. Introduction (sometimes)
   2. Suggestions for pupil evaluation
   3. Vocabulary
   4. Plan of action

After the resource units were organized, the introductory materials to the guide were arranged and the Table of Contents was developed. To give a clearer picture of the guide, the Table of Contents is reproduced below.

INTRODUCTION
   Foreword
   Acknowledgments
   Table of Contents
   A Health-Science Point of View
   Using This Guide

SCHOOL AND CENTRAL OFFICE RESOURCES

COMMUNITY RESOURCES

OUT-OF-TOWN RESOURCES

RESOURCE UNITS
   Unit I - Solving My Problems
   Unit II - Appraising My Health
   Unit III - Hearing and Seeing
   Unit IV - Keeping Healthy and Efficient
   Unit V - Making a Good Impression
   Unit VI - Living with Others
   Unit VII - Growing-up Physically
   Unit VIII - Growing-up Emotionally
   Unit IX - Diseases and My Health
   Unit X - Safe and Effective Living
By the last of September, 1957, the writing, stenciling, mimeographing and assembling of the guide were completed and the materials were sent to the binder. The first draft of the Health Science guide was ready for classroom use during October.
CHAPTER X

USING THE GUIDE EXPERIMENTALLY

By October, 1957, the first draft of the Health Science guide was ready for classroom use. Columbus health science teachers were asked to use the guide experimentally from October, 1957 to January, 1959. All organized efforts initiated by the central office for the purpose of furthering the experimental use of the guide will be related in this ninth step.

Introducing the Guide to Administrators, Teachers, Nurses, Consultants, and Parents

Special arrangements were made for introducing the completed Health Science guide to school and community personnel involved in its construction and use. Steps were taken to prepare the way for effective use of the guide long before the first draft was in final form.

Conference for Teachers and Administrators

During June of 1957, the Curriculum Council of the Columbus Public Schools approved a Health Science Conference for early fall for the purpose of discussing the new guide. The Council understood the need for a conference to explain the Health Science guide to teachers and administrators. So
that all health science teachers would be present, teachers were dismissed early from regular school duties.

The conference consisted of an afternoon and evening session. At the afternoon session, a speech, "Suggestions for Action," set the stage for the acceptance of the new guide. The Health Science guides were distributed to conference participants and three major questions were discussed: "How did the Curriculum Guide Committee decide upon the guide content?" "How does one use the guide?" "What is the relationship of the guide to other available resource materials?" Teachers who had helped with the preparation of the guide presented the various resource units. A series of demonstrations was presented by consultants, teachers, and nurses. Administrators and other teachers attending the conference observed and participated in the following demonstrations: The Snellen eye test, the pure-tone audiometric test, the use of the microscope and bioscope, the diabetes test, and the new method of artificial respiration.

The evening session of the conference commenced with small group meetings in which questions relating to the proceedings of the afternoon session were discussed. The group participants prepared a list of those questions that they were unable to answer. At the end of the buzz sessions, these questions were given to a reactory panel consisting of
resource teachers and consultants. The evening session closed with a brief summary of the conference.¹

**Health Problems Course for Teachers**

During August of 1957, negotiations with the Ohio State University resulted in a health problems course for Columbus health science teachers. The purpose of this course was to acquaint teachers with the content of the *Health Science* guide and with related materials suggested by the guide. The Department of Physical Education expressed a willingness to cooperate with the Columbus Public Schools in offering this in-service course for teachers during the fall quarter. As Stratemeyer says, "Institutions of higher learning have moved a long way toward tailoring programs to the needs of a particular school system or group."² Certainly this was true when the University changed this health problems course from afternoon to evening and when they geared the course to meet the specific needs of health science teachers.

Twenty-eight health science teachers indicated that they would enroll in the health problems course, *Health Education 641*. These teachers were given an opportunity to study and discuss the health problems contained in the guide.

¹On pp. 172-173 of Appendix B is a copy of the conference program.

Practical assistance in planning health science teaching units and lessons was given. Planned in-service programs, such as this University course, are necessary for adequate professional improvement.

The content, fact-finding, and activity parts of the resource units were studied. As the quarter drew to a close, there had not been sufficient time to study the pupil evaluation suggestions given in the resource units. Therefore, all the members of the class were asked to write a final report on the pupil evaluation suggestions that they had used in their health science classes. These reports were studied in relation to the pupil evaluation suggestions given in the Health Science guide. Abstracts from these reports are being held until the spring of 1959, when the pupil evaluation section of the resource units will be revised.

**Individual Conferences with Central Office Staff**

Individual conferences were arranged at the central office with directors, assistant directors, supervisor, and resource teachers who assisted with the development of the guide. At these conferences, the new Health Science guide was discussed and a personal copy of the guide was presented to each staff member. As a result of one conference, the Director of School Libraries asked that a copy of the guide be given to each junior high school librarian. At another meeting, the Supervisor of Nurses asked that a special
meeting be scheduled for junior high nurses, at which time they could become acquainted with the guide and with their role in the new health science course.

Special Meeting with Parents

The Health Science guide was introduced to members of the Parent Consultant Committee at an afternoon meeting at the Columbus Board of Education. The major aspects of the guide were reviewed and an open discussion of the guide followed. Correlation was made between the specific contributions of the committee and the completed guide. Parents were thanked for supporting the Curriculum Guide Committee and each parent received a copy of the guide.

Written Communications to Community Consultants

A personal note and a copy of the guide were sent to each community consultant who had helped with this research project. The personal note thanked each of the consultants for his contribution. Certain page references in the guide were called to the attention of each consultant. These page references indicated the section or sections of the guide which would be of greatest interest to the consultant. Usually, the consultant had assisted with these sections in some way.

Adapting the Guide for Television

The Health Science guide had been in use in the classroom for the greater part of one year when, in June of 1958,
the Columbus Board of Education approved an experimental program of instruction in health science to be televised over WOSU-TV. The major purpose of this television experiment was to enrich and to improve the quality of instruction offered in the health science course. This program was to influence the use of the guide during the following school year.

Materials from the Health Science guide were adapted for television. The Columbus Public Schools provided the television teacher and supervised the preparation of the lessons, whereas consultant services, teaching aids, and telecasting facilities were made available by the Ohio State University.

Daily twenty-minute broadcasts were received by ten junior high schools. As indicated earlier, the basic content material for the television broadcasts was selected from the Health Science guide. A Television Planning Committee, composed of three teachers and one administrator, under the direction of the Department of Physical, Health, and Safety Education, prepared the television lessons. The guide was studied continually, and materials were reorganized and expanded, or deleted, as necessary for effective television teaching.

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3Board of Education, Columbus City School District, Minutes of the Board of Education of the Columbus City School District, June 17, 1958, p. 7.

4Ibid.
The content of the guide was examined critically and thoroughly not only by the Television Planning Committee but by the sixteen health science classroom teachers who were involved in the television experiment. In January of 1959, a series of meetings was initiated for the purpose of including these teachers in the planning of a unit of instruction for television. This unit, composed of several lessons, was entitled "Coping with Habit Forming Drugs." As had occurred in previous television units, the Health Science guide and materials suggested in the guide served as the basic references for organizing the lessons. The planning of this unit and the viewing of all television lessons are proving to be a valuable in-service experience for these teachers. Most of the televised lessons were preceded and followed by an instructional period conducted by the classroom teacher. In one or two schools, because of scheduling problems, the pre- or post-instructional period might have been lost. The Health Science guide and a brief outline of each television lesson was prepared and given to the health science teacher in advance. These outlines repeatedly make reference to detailed sections of the Health Science guide.

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5Columbus Public Schools, Department of Instruction, Health Science Television Study Guide.

6A sample outline prepared for a television lesson is submitted in Appendix B, p. 174.
Over ninety television lessons were kinescoped. Health science teachers not participating in this experiment can obtain these kinescopes for class use from the Department of Radio and Audio-visual Education at the Central Office. These kinescopes have encouraged teachers to teach resource units as suggested in the *Health Science* guide.

Attention has been focused briefly on this health science television experiment because of its direct relationship to the development of the *Health Science* guide. Needless to say, the significance of the health science television experiment cannot be overlooked. As a result of the television experiment, which required many hours of continuous research, the content of the *Health Science* guide has been strengthened. The use of guide materials in preparing lessons for television gave teachers and administrators another opportunity to use the guide experimentally. However, the development of the *Health Science* guide and the health science television experiment are independent research projects. Each project has complimented and supplemented the other.

**Assisting Teachers to Use the Guide**

The Division of Instruction of the Columbus Public Schools assisted teachers continually as they experimented with the *Health Science* guide after its release in October of 1957. As has already been stated in this chapter, health
science teachers were introduced to the guide at a special conference. This was just the beginning because a variety of other in-service activities were to be planned for the purpose of assisting teachers with the use of the guide. Curriculum development is not necessarily guaranteed by any one single in-service activity. Different activities for curriculum improvement are important to the extent that differences in results occur from their use.

**Visitations**

During the period that the *Health Science* guide was used experimentally, teachers were visited individually in their respective classrooms by members of the central office staff. The primary purpose of these visits was to offer assistance to those health science teachers who were attempting to use the new guide. Many instructional problems were solved through these face-to-face contacts. Teachers who did not have a background in the area of health education needed the most guidance.

**Area Meetings**

During April and May of 1958, area meetings were held for health science building representatives and for principals. All sixteen junior high schools were represented at

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7 Stratemeyer, *op. cit.*., p. 669.

one of these area meetings, scheduled at the central office. Common problems concerning the use of the guide were identified, and by using the round-table discussion technique, many of these problems were solved. Again, during October of 1958, the Department of Physical, Health, and Safety Education called two area meetings for all health science teachers. One of these area meetings was held in the south section of Columbus and the other meeting was held in the north section. Central office staff members asked that teachers give thoughtful consideration to the teaching of Unit II, "Appraising My Health." The new Medical-Dental Record, which had been introduced at the August Institute for the first time, was again discussed. Procedures for administering the medical-dental examination were reviewed. The importance of handling the examination as a part of the "Appraising My Health" unit was stressed. Also, the Snellen eye-screening examination was emphasized. It was suggested that teachers make a special effort to include this activity in Unit III, "Seeing and Hearing."

Institute

The August 1958 Institute was planned for all health science teachers. This institute gave teachers an opportunity to work with consultant help in small group situations.

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9 The August Institute program appears in Appendix B, p. 175.
on problems of concern to them. For example, the teachers involved in the television experiment received individual assistance. The institute emphasized the continued use of the *Health Science* guide by all teachers. The relationship of the telecasts to the content of the guide was mentioned repeatedly.

**Conferences**

Two conferences for health science teachers were held during the 1958-1959 school year. Both conferences were held on released time. The September meeting was held specifically for health science television teachers. Several important questions were answered for teachers: "Are other cities experimenting with television?" "How might we evaluate our television programs in Columbus?" "What is the role of the classroom teacher in effective pre-television and post-television teaching?" In discussing this last question reference was made to the use of the *Health Science* guide in preparing for a lesson.

The January mid-year conference was planned for the purpose of giving all health science teachers an opportunity to share effective pupil activities. This question was asked, of the teachers in attendance, "What pupil activities suggested in the guide are producing desired results in the

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10 The September Conference program is given in Appendix B, p. 176.
classroom? It was pointed out that not all activities are of equal educational value. Also, the Mid-year Conference provided an opportunity for teachers to become acquainted with the latest health science kinescopes and the procedures for obtaining these special audio-visual aids.11

Summary

The ninth research step was the experimental use of the guide from October, 1957 to January, 1959. In the fall of 1957, the guide was formally introduced to school and community personnel who were involved in its preparation and use. This was accomplished by planning group conferences with administrators and teachers, by arranging individual conferences with central office staff, by offering a "tailor made" university course for teachers, by calling a special meeting for parent consultants, and by writing personal notes to community consultants.

During the 1958-1959 school year, the Health Science guide was adapted for television. The major purpose of the television experiment was to improve the quality of instruction; likewise, this was the aim of the Health Science guide. Health science via television influenced in a positive way the use of the guide for several reasons. (1) The telecasts were developed from the resource units established in the

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11 For more complete details see the Mid-Year Conference Program in Appendix B, p. 177.
guide. In preparing the lessons for television, the Television Planning Committee and the health science classroom teachers involved in the experiment used the guide continually. As a result, the guide materials were explored and improved. (2) Principles of teaching suggested in the guide were implemented over television. For example, multiple printed and graphic materials were used instead of a single text.

Teachers are not always susceptible to change; therefore, curriculum leaders have the responsibility of planning in-service activities which will help to bring into focus new materials and ideas. Change takes places in many ways, through whatever activities—techniques and procedures—are appropriate to the particular situation. The Division of Instruction planned several in-service activities during the time that the guide was being used experimentally. These were classroom visits, an institute, and conferences, and they helped teachers to accept and to gain confidence in using the new guide.
CHAPTER XI

EVALUATING THE GUIDE

It is of paramount importance that all curriculum materials be tested in the classroom. The Health Science guide is no exception. Thus the tenth research step in this study was the evaluation of the guide. "Evaluation means to appraise something according to a set of values."¹ It is a complex process which, when fully carried out, employs democratic cooperativeness and is comprehensive. Evaluation should be based on valid criteria and should be both functional and continuous. The evaluative process is clearly defined by James B. Burr, et al., who writes,

The process of determining the extent to which values are achieved, purposes carried out, and goals reached is evaluation. The term is derived from the word "value" since the appraisal of the effectiveness of educative experiences should be based upon a consistent, sound, democratic system of values.²

Good evaluation is always done in terms of aims and objectives. In the third research step of this study, the

¹Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, Health Education, p. 337.

²Student Teaching in the Elementary School, p. 183.
purpose and the objectives of the Health Science guide were stated. At this time, it seems pertinent to restate these goals. The aim of the guide is to provide the teacher with a useful instructional aid which will help to improve the teaching-learning situation. The objectives of the guide are to present problems that meet the needs and interests of the pupils, to acquaint the teacher and pupils with useful up-to-date fact-finding resources that can be obtained from the school and central office, from the larger community, and from out-of-town resources, to identify a variety of worthwhile pupil activities that will help to make the content material more vital and meaningful, and to offer suggestions for pupil evaluation that will assist the teacher and the pupils in determining if the objectives of the resource units are being reached.

Without a doubt, the teacher is the best qualified person to evaluate the guide in terms of these goals. Article after article has indicated that teachers should play a leading role in curriculum revision. The emphasis should be on teacher participation. There has been no change in this principle of evaluating courses of study, or curriculum guides, over the past thirty years. In 1931, an article by O. C. Griggs in the Bulletin of the Department of Elementary School Principals advocated involving teachers in the evaluation of courses of study. "These tentative courses of study," he wrote, "are the work of teachers. Their
modification and adjustment will depend, largely, upon
teacher reactions and critical observations in their use of
the courses in the classroom." In 1947, William J. Krum,
Jr. and Ralph Adams Brown said, "Curriculum revision is a
part of the normal professional task of teachers, enhancing
the standing of the profession and making the work of the
individual teacher more effective." In 1950, Merrill F.
Hurd said that the evaluation of courses of study depends
upon actual classroom trial. The judgment of a group of
teachers is important.

When determining who should evaluate the guide, the
Curriculum Guide Committee also believed that teachers should
play a major role. However, they felt that other people, such
as central office and community consultants, who had helped
to develop the first draft of the guide should be involved in
the evaluative process, too.

Selecting Techniques for Evaluating the Guide

Numerous studies on evaluation of curriculum guides
were surveyed to find in what ways teachers could evaluate
the guide effectively. Most of these were theses, doctoral

3 "Curriculum Revision Program," Bulletin of the Depart-
ment of Elementary School Principals, X, No. 2 (January,
1931), 73.

4 "Criteria for Evaluating Curriculum Change," School
and Society, LXVI (September, 1947), 200.

5 "Getting Started on Curriculum Revision," Nations
Schools, XLV, No. 4 (April, 1950), 39.
dissertations, and articles from professional educational magazines. After much deliberation, the interview, the questionnaire, and the review were selected as the techniques to be used in evaluating the Health Science guide. The most helpful single source used in developing these evaluative instruments was a textbook, Research Methods in the Behavioral Sciences, by Leon Festinger and Daniel Katz.

Interview

"The criteria of directness and economy and the ability to collect data about beliefs, feelings, past experiences and future intentions have widened the range of application of the interview."\(^6\) The interview, as used in this study, is a meeting of two people in a face-to-face situation, arranged for the purpose of conferring about the Health Science guide. The interview technique was selected since it could provide easy accessibility to the required evaluative data. Teachers as users of the guide could alone supply most of the data needed—data that could not be obtained elsewhere. The interview questions were directed so as to get the opinions of teachers as to whether they thought the guide objectives were being met. "Open" or "unrestricted" questions to be asked in the interview were carefully selected and prepared in advance. One advantage of these questions was that there

is no set answer; therefore, the respondent was encouraged to structure his own answer. This gave the respondent considerable freedom. Another advantage of the open questions in the interview was the fact that the answers indicated the respondents' level of knowledge. The interview questions were formulated as follows:

1. **What suggestions do you have for making the guide more usable?**

2. A careful study of the guide reveals one "key" section. This section consists of the resource units. **Do you believe that these resource units were well selected for eighth graders?**

   A. **How effective is the problem approach used in the resource units?**

   B. **Do these problems meet the health needs and interests of your pupils?**

   C. **Do you think that the activities identified in each resource unit help to make the content material more vital and meaningful to the pupils?** (Suggested types of pupil activities appearing in the Health Science guide are debates, demonstrations, discussions, dramatizations, finding solutions to problem situations, health word studies, keeping individual health records, keeping notebooks, making scrapbooks, oral and written committee reports, panel discussions, participating in health screening tests, performing simple experiments, planning and evaluating community visitations, planning displays and exhibits, planning special projects, preparing for and following up the visitations by resource persons, studying printed and graphic materials, unit pretests, viewing and discussing audio-visual materials and writing an autobiography.)

   D. **How do you like the suggestions given for pupil evaluation in the resource units?**

   E. **Is there evidence from pupil evaluation that the objectives of the resource units were reached?**
3. In addition to the resource units, the Health Science guide identifies school and central office, community, and out-of-town resources. Were these resources helpful?

A. Did you invite any resource persons to your class?

B. Would you care to comment on the effectiveness of these resource persons?

If these interview questions are studied, it will be noted that the more general or unrestricted questions were asked first, followed by more specific or restricted questions. In this way, the "funnel approach" was used; that is to say, the frame of reference was gradually narrowed. In several instances a definite attempt was made to use transition statements to move from one question to another (see questions 2 and 3).

After the first draft of the interview questions was constructed it was pretested by the Curriculum Guide Committee. Once the interview questions were firmly agreed upon by the committee, they were organized for immediate use.

During the 1958-1959 school year sixty-three teachers were teaching health science in Columbus Public Schools. Of this number, thirty had taught health science for two years, that is, since the beginning of the new health science course in 1957. Letters were written to these health science teachers. They were asked if they would be willing to discuss the revision of the Health Science guide. In a personally typed letter to each teacher, a date and a time were
suggested for holding the interview. In each case it was suggested that the interview take place at their school during one of their free or planning periods. All teachers willingly cooperated. In only two instances was it necessary to reschedule the interview.

During January, 1959, all the interviews were scheduled and conducted. The author served as the interviewer because it was believed that she was qualified to manipulate the interviewing instrument and to interpret the results. No two interviewing situations are alike. "The interviewer," Festinger and Katz point out, "cannot apply unvaryingly a specified set of techniques, because he is dealing with a varying situation."7 "The success of the interview," they add, "is very largely dependent upon the extent to which the interviewer is insightful and successful in recognizing and dealing with social-psychological phenomena."8

The interview, as a technique for evaluating the guide, does have certain limitations, but so do other evaluative techniques. However, it is important that the limitations of the interview be recognized. The involvement of the interviewer in the data that he is reporting does allow an opportunity for bias. The respondents, on the other hand,

7Ibid., p. 332.
8Ibid., pp. 332-33.
may not be able to respond to each question asked and, in some situations, they may have a partial lapse of memory.

Motivating the respondents for the interview was not a problem in this study. In the first place, all of the respondents knew about the Health Science guide and, for the most part, were interested in the project. Naturally, the interview questions, if appropriately selected and prepared, would help the interviewer in motivating the respondent to communicate the required information.\footnote{Ibid., p. 340.} The interview questions for the evaluation of the guide were adequate for these purposes.

At the beginning of the interview, certain information was shared with each respondent. This information was as follows: The purpose of this interview is to give you an opportunity to assist in evaluating the Health Science guide. Our plans are to revise the guide this spring. All health science teachers who have had the guide in their possession for over a year are being asked to assist with the evaluation. The Columbus Public Schools' Division of Instruction is sponsoring the study. The information that you give will be treated in a confidential manner. With your permission, a few notes will be taken during the interview.

The questions of the interview identified earlier were carefully worded so that they would build rapport.
between the interviewer and the respondent. The anxieties of the respondent would be relieved if rapport could be established. The carefully worded questions, transmitted to the respondent verbatim, resulted in standardization of the interviews. Questions presented in the interview were varied only when the respondent was unable to understand the question. The interviewer used nondirective probes, when necessary, to obtain additional information from the respondent and to stimulate complete responses. Remarks by the interviewer such as "Yes" and "Tell me more about it" were used. Sometimes a mere nod of the interviewer's head was an effective indication that the respondent should continue. On still other occasions, the interviewer merely paused.

In most situations, both the respondent and the interviewer obtained satisfaction from the interview and a productive counseling atmosphere prevailed. The interviews lasted between thirty and forty-five minutes. Before the interviews ended the respondents were thanked for their cooperation. Since their time was limited and since there were still other questions that needed to be answered about the guide, they were asked to complete within the next few days a questionnaire to supplement the interview.

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10 Ibid., pp. 357-58.
Questionnaire

The questionnaire was the second technique used for evaluating the Health Science guide. It was a mimeographed form consisting of a list of questions designed for gathering information about the use and effectiveness of the health resources. The questionnaire was used in evaluating resources because the range of responses to the questions were limited and "restricted" or "closed" type questions could be asked. The last question on the interview (see p. 122) is concerned with resources in general, and with the use and effectiveness of resource persons. The questionnaire continues to discuss the use of other resources. To determine the usefulness of these resources, teachers were asked to rate each of the audio-visual materials that they had used in their health science class; to rate each of the printed and graphic materials that they had used as a resource in their health science class; to tell what other effective printed and graphic materials and audio-visual materials they had used in their health science class; and to rate each of the community visits they and their pupils had made.11

11A copy of the letter of explanation that accompanied the questionnaire is found in Appendix C on p. 179. Following this letter is a copy of the questionnaire entitled "A Questionnaire on the Use of the Health Science guide by Eighth Grade Teachers in Columbus Public Schools" (see p. 180 through p. 191).
The questionnaire, like the interview, was pretested by the Curriculum Guide Committee. Several basic principles were followed in constructing the questions for both the interview and the questionnaire. The questions were written in a language that teachers could understand. Since they were all familiar with the *Health Science* guide communicating with the health science teachers was an easy task and the frame of reference was not difficult to establish. Also, the respondents could see the relationship between a question asked and the objectives of the guide. Questions did not need to be reworded in most instances and the question sequence seemed logical. In fact, some respondents were able to anticipate the next question.

**Review**

The third and final technique used in evaluating the guide was a review, or critical re-examination. This technique might not be considered by some to be an evaluative tool; however, it was important that the scientific accuracy of the guide be rechecked and that the resource information be brought up-to-date. The school and central office resources, community resources, and out-of-town resources were to be reviewed by the contributors, who consisted of eight central office staff members, sixty community consultants, and fifteen out-of-town consultants. Letters were written to each of these individuals asking them to review the portion of the guide relating to their organization.
The following questions were asked each consultant: "Are all data stated accurately"? "Should any of the information be added"? They were also asked to list other suggestions for revision. The answers to these questions would determine the accuracy of the material in the resource sections of the guide and would bring all information up-to-date. Other suggestions for revising the resource sections would be presented to the Curriculum Guide Committee for consideration. Also, for the purpose of re-examining the guide, the school physician was asked to review the content material in the resource units in order to recheck the scientific accuracy of the information presented.

**Interpreting Results**

The information obtained from each of the evaluative techniques was summarized and results were interpreted. Each interview question was stated and under each question specific findings were discussed. Also, specific results from each part of the questionnaire were summarized. However, because of the nature of the review, only general results can be presented.

**Results from Interviews**

The comments and suggestions given by the thirty respondents did not always answer the question asked. However, the interviewer grouped the reactions of the teacher-respondents under the proper question when the data was
summarized. Each question listed on the interview form will be discussed in chronological order.

1. What suggestions would you have for making the guide more usable?

The answers given to this question by teachers were grouped under two headings: general suggestions for improving the total publication and suggestions for improving the supplementary sections of the guide.

The general suggestions for improving the total publication referred most frequently to the size of the guide. Comments were made about reducing the size of it. For example, it was said that "the guide is too bulky"; that "the size of the guide is unwieldly"; and that "the size of the guide is preponderant." It was suggested that the guide be brought up-to-date, that it be expanded into a textbook, and that it be printed. And it was also suggested that the guide be so constructed that individual units can be removed and that the structure of the guide be flexible.

Suggestions for improving the supplementary sections of the guide were very concise, yet important. Teachers said that an index and cross reference system should be provided in the guide. They indicated that the table of contents needs to appear in greater detail and that the title page of the guide should clarify the meaning of health science.
2. **Do you believe the resource units were well selected for eighth graders?**

Teacher responses to this question were grouped under general suggestions regarding the resource units and under specific suggestions for each unit.

General suggestions repeatedly mentioned the need to eliminate duplications in the content material of the resource units. Teachers stated that the guide material should be screened more carefully in order to remove areas of constant repetition.

The format of the resource unit, teachers felt, should be revised. They suggested that those revising the guide study again the formats used by other curriculum makers and consider the possibility of binding the book at the top so that the long dimension of the page runs horizontally instead of vertically.

Teachers strongly agreed that all of the resource units are important and appropriate for eighth graders. They said that none of the resource units should be deleted.

Most of the teachers felt that certain resource units should be required. At the same time, an estimate, they felt, should be made of the minimum and maximum number of weeks each unit should be taught.

Teachers expressed the opinion that they liked the simple terminology used in writing the guide. They hoped that this same style would be continued in the revision.

The health science teachers who had seen and used the
television kinescopes suggested that these kinescopes be considered when the resource units were revised. Also, they suggested that the **Health Science Television Guide** could be of assistance in revising the **Health Science** guide. The respondents volunteered certain specific suggestions that related to each of the resource units. Summaries of these suggestions follow.

**Unit I. Solving My Problems**

Teachers felt that this unit should definitely remain in the guide. It is very important that pupils develop a scientific attitude and that they learn to solve their problems intelligently. Pupils need guidance in how to study. Also, pupils need to give careful consideration to their role as consumers of health products.

**Unit II. Appraising My Health**

According to the teachers, this unit should be even more concise than it is. Although the length of this unit is short, it is, as they see it, an important unit and should be required. The objectives of the unit, the teachers feel, are clearly defined.

**Unit III. Seeing and Hearing**

Teachers believed that the importance of this unit could not be denied. There are many opportunities to relate physical science to the content of this unit. The school and home environment are inseparable aspects of the unit. A
number of experimental tests can be performed. Certainly, the Snellen screening test should be one of these. However, health science teachers questioned the ineffective methods that were recommended for the testing of hearing in their classrooms. Also, teachers requested that more information about specific eye diseases be presented in this unit.

Unit IV. Keeping Healthy and Efficient

Very few comments were made about this unit. Several teachers did feel that the area of nutrition should not be included because it was taught in home economics and in the self-contained classroom.

Unit V. Making a Good Impression

Teachers agreed that this unit is necessary; however, a special effort, they feel, should be made to understand exactly how this information is presented in the self-contained classroom and in home economics. The unit, they stated, must be re-emphasized in terms of time allotment and some thought should be given to ways in which boys can be helped to make a good impression.

Unit VI. Living with Others

Most teachers questioned whether the teaching of this unit could be justified in health science. Far too much emphasis, they feel, has been given to this unit. They said that the information presented in this unit is covered in many other areas of the school program, and that if this
unit remains in the Health Science guide, it should be shortened and it should not be required.

    Unit VII. Growing-up Physically

Health science teachers strongly agreed that this unit is unique to health science and should be fully developed. The biological science concept should be stressed. This unit should be one of the longest, if not the longest, unit offered in the course. The teaching of sex education should continue to be an important part of this unit, although it still remains a difficult problem to handle in certain schools. Heredity should be added to the content of this unit.

    Unit VIII. Growing-up Emotionally

Teachers said that understanding our emotions and why we act as we do is very essential. The relationship between mental and emotional health should be made clear. An effort should be made to determine the ways in which emotional health is taught in home economics and in the self-contained classroom. The resource materials relating to the nervous system should be less complex.

    Unit IX. Diseases and My Health

It was unanimously agreed by teachers that a unit on diseases must remain in the guide. It was recommended that this unit be required.
Unit X. Safe and Effective Living
Teachers stated that this unit should be taught during the first semester and it should be required.

Unit XI. Coping with Habit-Forming Drugs
It was strongly recommended by teachers that tobacco be included in this unit. This unit should be required, not only because of state requirements, but because attitudes toward the use of habit-forming substances are being formed at this age level.

Unit XII. Columbus, A Healthy City
This unit the teachers feel has value; however, they stated that the content outline needs to be more fully developed.

Unit XIII. Science and Everyday Living
Teacher respondents advocated that this unit be completely revised. Emphasis should be placed on health problems in the space age. The contributions of great men and women could remain a part of this unit. Certainly, careers in health science are of interest to eighth graders.

2. A. How effective is the problem approach used in the guide?

Teachers generally agreed that the problem approach was very effective. One teacher said, "I like the problem approach, as it is thought provoking." Several teachers suggested that the outline of facts under each problem be rechecked for consistency of detail and for accuracy. The
teachers seemed to like the relationship of the content column to the fact-finding and activity columns.

2,B. Do these problems meet the health needs and interests of your pupils?

Teachers were of the opinion that the problems met the health needs and interests of their pupils. One teacher said, "Yes, the problems meet the needs and interests of my pupils. This is especially true since there is a sufficient number of problems listed in the guide and it is possible to be selective."

It was suggested that a pretest be prepared for each resource unit. This pretest would be a problem type inventory. Teachers could use the pretest to determine the health needs and interests of pupils in each content area.

2,C. Do you think that the activities identified in each resource unit help to make the content material more vital and meaningful to the pupil?

First, the general answers to this question should be summarized. Yes, teachers considered the activities identified in the guide to be very helpful. In fact, in the interviews most teachers talked at length about pupil activities. One teacher said, "The activity suggestions are good in all respects except one. How do you do the activities? For example, the suggestion, "Have pupils keep notebooks," is given, but there are no suggestions about how to keep notebooks."
It was suggested that all teachers take an active role in revising the suggested activities for the resource units. Many testimonials were made by health science teachers about the success of various types of pupil activities suggested in the guide. Some of the more meaningful and vital activities were keeping notebooks, committee work, tape recording, interviewing, individual reports, bacteria experiments, screening tests, keeping class notes, planning health projects, collecting health clippings, oral reports, vocabulary studies, respiratory experiments, sociogram studies, writing autobiographies, special research reports, class discussions, listening to the health radio programs, drawing parts of the body, microscope studies, identifying types of science equipment, collecting bones, making scrapbooks, comparing the camera with the human eye, light meter demonstration, completing medical-dental examinations, testing foods, panel discussion, giving and analyzing the Science Research Associates Inventory, viewing films and filmstrips, studying teeth X-rays, dramatic skits, studying real organs of the body and demonstrating proper table manners.

Teachers requested that the revised guide include more do-it-yourself projects and simple experiments. Also, one teacher suggested that the better students should have an opportunity to teach the class a new activity. Case studies of unidentified persons were popular as class activities.
2. How do you like the suggestions given for pupil evaluation in the resource units?

For the most part, teachers were not satisfied with the suggestions for pupil evaluation. They wanted more specific suggestions. Several teachers suggested omitting the evaluation column of the unit format. Others suggested placing the evaluation section at the end of the resource unit. A common suggestion was that standardized health tests be secured for committee study and that these tests be considered for evaluation purposes.

2. Is there evidence from pupil evaluation that the objectives of the teaching units were reached?

Yes, most teachers believed that there was evidence from teacher evaluation to support the fact that objectives were being met. However, in most instances it was difficult for teachers to accurately substantiate their beliefs. In a few cases their statements were more than opinions; they were accounts of observed facts or effects. Such statements as, "Our class discussions about courtesy have influenced the way in which pupils have treated special visitors"; "The fact that pupils with eye defects have had the necessary corrections made is very concrete evidence that specific objectives have been met"; "After experiencing the unit "Making a Good Impression," "Some changes in pupil dress were observed"; "I do much individual counseling. In these situations I am able to notice that objectives are being met" are statements of this kind.
3. Were the school and central office, community, and out-of-town resources helpful?

General comments indicated that the resources were very helpful. Several teachers felt that the resource sections of the guide were of immense value. They suggested that the availability of the resources be rechecked. Several teachers wanted the resource sections of the guide to be placed in a separate publication.

More specific comments by teachers about the school and central office resources indicated that if a new textbook were to be adopted that it should be done concurrently with the revision of the guide. Several teachers stated that the multiple text approach should be continued; others wished to return to one basic textbook.

Teachers suggested rescreening the filmstrips from the central office. Also, they were anxious to have a description of each filmstrip included in the guide. They suggested that the available health science kinescopes be listed, including a brief description of each.

Teachers wanted to have school library books relating to each unit identified. Then a bibliography of available books could be given to the pupils for their use.

Specific teacher comments about community resources indicated that their availability should be rechecked. Films from the Grandview Library should be added. School policies regarding community visits should be more lenient.
3,A. **Did you invite any resource persons to your class?**

More than half of the health science teachers invited resource persons to their classes. There were twenty-three different resource persons invited to health science classes. The most resource persons invited to any one class were four. The most popular resource person was the school nurse. On nine different occasions the school nurse served as a resource person in health science classes. The school counselor was the second most requested resource person.

3,B. **Would you care to comment on the effectiveness of these resource persons?**

All teachers who used resource persons believed that they were effective. One teacher said, "All of the resource persons have been very good. They always have fresh ideas. Their equipment is excellent." Another teacher said, "The resource persons I had were outstanding. Time always seems to be a limiting factor. Teachers need to coordinate their efforts so that classes can be combined for the visit of a resource person."

The interview proved to be a very valuable and profitable technique for evaluating the guide. Under the existing circumstances, the required data were readily accessible through the interview. Teacher responses were assured in prompt order in most cases. The directness of the interview gave teachers an opportunity to express openly their attitudes and perceptions.
Results from Questionnaires

Each of the thirty teachers interviewed received a questionnaire, which he was asked to complete. Of this number, 86 per cent returned the completed questionnaire. Responses were tallied and the results are as follows: All teachers, with the exception of one, had used some of the audio-visual materials suggested in the guide. In all, eight hundred and forty-six instances of the use of audio-visual materials were reported; the questionnaire listed two hundred and forty-one different audio-visual materials. Of these aids, one hundred and ninety-five were used by one or more teachers. The ratings did not single out any aids as being repeatedly "poor." In fact, less than 3 per cent of the audio-visual materials used were rated "poor," by one or more teachers. On the other hand, many audio-visual aids were rated "good." Five or more teachers used and rated each of the following audio-visual aids as "good." Films: "Hemo, the Magnificent" and "Making Friends." Filmstrip: "Manners at Home." Special Audio-Visual Equipment: filmstrip projector, movie projector, and tape recorder. And Special Loan Item: model of the ear. The number of central office and the number of community films used were approximately the same.

All teachers completing the questionnaire, except one, had used some of the printed and graphic materials suggested by the guide. The number of printed and graphic materials used totaled 2,334. The names of 193 different printed and
graphic materials appeared in the guide; all but six of these printed and graphic materials were used by one or more teachers. The ratings did not single out any materials as being repeatedly "poor." However, many printed and graphic materials were rated "good." Five or more teachers used and rated "good" the following printed and graphic materials.


**Handouts:** "A Guide to Good Eating," "Eat a 'Square' Lunch,"

The questionnaire returns definitely indicate that the audio-visual and printed and graphic materials listed in the guide were being used by teachers. The teachers completing the questionnaire did not indicate any materials to be added to the revised guide. Teachers undoubtedly had sufficient resources at their finger tips. Possibly, the Curriculum Guide Committee had thoroughly identified the foremost health resources available in the schools and in the community.

The questionnaire results revealed that very few small research group visits were made. In fact, only eleven visits were arranged. Still fewer class visits were scheduled--two
to be exact. Both of these class visits were to Columbus Recreation Centers. Several teachers pointed out in the interviews that because of the rigid school schedule and because of transportation problems, trips were difficult to plan.

The questionnaire was helpful in evaluating the health resources. It succeeded in motivating the teacher respondent to provide the requested information needed to supplement the interview.

Results from Reviews

The individual guide reviews by central office, community, and out-of-town consultants succeeded in bringing the health resource information up-to-date and in checking the accuracy of the information. A review of the content part of each resource unit by the school physician guaranteed that the content material was scientifically accurate.

Summary

In evaluating the Health Science guide, the Division of Instruction, Department of Physical, Health, and Safety Education of the Columbus Public Schools assumed the leadership role. Personnel from the Division of Instruction involved teachers more than any other group in the evaluative process. The following quotation by Henry Harap and Eleanor Merritt expresses quite well, not only the cooperative
relationship that existed between the administration and teachers but the reasons for involving teachers.

The continuous revision of curriculum guides is generally accepted as the function of the administrative leadership of a school system. It continues to be a cooperative process involving many teachers, not only because it results in the improvement of teaching and learning, but also, because it is one of the most effective means of professional growth which reaches the largest number of teachers in a school system.12

CHAPTER XIII

RECOMMENDATIONS AND SUGGESTIONS

This dissertation tells the story of a project in curriculum research, the development of a tentative Health Science guide for Columbus Public Schools. Thus far the discussion has dealt with the procedures used in the development of the guide, which included studying the present program, collecting and reviewing pertinent literature, determining the aim and objectives of the guide, identifying pupil needs and interests, securing judgments of administrators, teachers, nurses, counselors, parents, and health authorities, selecting problem areas, surveying and screening available health resources, developing the resource unit, using the guide experimentally, and evaluating the guide.

There remains to be discussed two important results of the project—recommendations for revision of the guide which come about as a result of the evaluative process and suggestions for other health educators who may undertake projects similar to this one.

Recommendations for Revision of the Guide

The Curriculum Guide Committee studied the results from the interviews, the questionnaires, and the reviews at a
series of meetings. At the conclusion of the fifth meeting, the committee prepared and agreed upon a list of recommendations for revising the guide:

1. **The meaning of the title of the guide should be clarified.**

   The title of the guide is **Health Science.** Health science is a branch of science dealing with the total well being of man. Related sciences are involved when they help to solve personal and community health problems.

2. **The table of contents should be developed in greater detail.**

   For example, in the first draft of the guide only the title of the resource units appear in the table of contents. In the revised guide all problem areas within a resource unit should be listed in the table of contents.

3. **The provision for school and central office, community, and out-of-town resource information should be continued in the guide.**

   Those responsible for revising the guide should be more selective in their choice of fact-finding sources.

4. **All aspects of the guide should be brought up-to-date.**

   For example, since the first draft of the guide was prepared, new printed and graphic materials have been published and the names of several resource persons have changed.
5. The following resource units should be placed in the revised guide:

Unit I. Solving My Problems
Unit II. Appraising My Health
Unit III. Seeing and Hearing
Unit IV. Keeping Healthy and Efficient
Unit V. Making a Good Impression
Unit VI. Growing up Socially
Unit VII. Growing up Physically
Unit VIII. Heredity
Unit IX. Growing up Mentally and Emotionally
Unit X. Careers in Health Science
Unit XI. Diseases and My Health
Unit XII. Safe and Effective Living
Unit XIII. Coping with Habit-Forming Substances
Unit XIV. Columbus—A Healthy City

Note that the unit "Science and Everyday Living" has been eliminated. The contributions of great men and women, which were a part of this unit, have been distributed throughout the guide according to their relation to given problem areas. Two new resource units, Unit VIII, "Heredity," and Unit X, "Careers in Health Science," have been added. In the first draft of the guide, heredity was rather superficially treated in the unit "Growing up Physically." Also, in the unit "Science and Everyday Living" health careers were briefly considered. It has been suggested that the new unit, "Careers in Health Science," be taught before April, since at about that time boys and girls in the eighth grade elect their high school course of study. The titles of two resource units have been changed. Unit VI has been changed from "Living with Others" to "Growing up Socially" and Unit XIII from "Coping with Habit-Forming Drugs" to "Coping with
Habit-Forming Substances." This last title change was made because tobacco was added to the content of the unit.

6. **Committees for guide revision should be established.**

Fourteen small city-wide committees composed of teachers, principals, nurses, dental hygienists, hearing and sight conservationists, librarians, and community consultants have been organized for the purpose of revising the guide. Each committee, consisting of from three to five members, is assuming responsibility for revising a single resource unit. The findings from the techniques used in evaluating the guide are shared with the revision committees. The Curriculum Guide Committee is coordinating the activities of the revision committees.

7. **Selected resource units should be required teaching for all health science teachers.**

These units would be Unit II, "Appraising My Health"; Unit XII, "Safe and Effective Living"; and Unit XIII, "Coping with Habit-Forming Substances." Unit II should be required because of the importance of learning about and practicing scientific ways of appraising health. Unit XII should be required because accidents are the leading cause of death among adolescents. Unit XIII should be required because the State of Ohio makes mandatory the teaching of the nature and effects of narcotics and alcohol.
8. **Selected resource units, though not required, should be taught by all health science teachers.**

These units are strongly recommended: Unit III, "Seeing and Hearing"; Unit VII, "Growing Up Physically"; and Unit XI, "Diseases and My Health."

9. **The minimum and maximum number of weeks that it should take to teach each resource unit should be estimated.**

The following list indicates the times estimated for the various units suggested by the Curriculum Guide Committee.

<table>
<thead>
<tr>
<th>Resource Units</th>
<th>Minimum and Maximum Number of Weeks Required to Teach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solving My Problems</td>
<td>2 - 3 weeks</td>
</tr>
<tr>
<td>Appraising My Health</td>
<td>1 - 2 weeks</td>
</tr>
<tr>
<td>Seeing and Hearing</td>
<td>2 - 3 weeks</td>
</tr>
<tr>
<td>Keeping Healthy and Efficient</td>
<td>2 - 3 weeks</td>
</tr>
<tr>
<td>Making a Good Impression</td>
<td>3 - 4 weeks</td>
</tr>
<tr>
<td>Growing up Socially</td>
<td>2 - 3 weeks</td>
</tr>
<tr>
<td>Growing up Physically</td>
<td>2 - 3 weeks</td>
</tr>
<tr>
<td>Heredity</td>
<td>1 week</td>
</tr>
<tr>
<td>Growing up Mentally and Emotionally</td>
<td>1 - 2 weeks</td>
</tr>
<tr>
<td>Careers in Health Science</td>
<td>1 week</td>
</tr>
<tr>
<td>Diseases and My Health</td>
<td>3 - 4 weeks</td>
</tr>
<tr>
<td>Safe and Effective Living</td>
<td>4 - 5 weeks</td>
</tr>
<tr>
<td>Coping with Habit-Forming Substances</td>
<td>2 - 3 weeks</td>
</tr>
<tr>
<td>Columbus--A Healthy City</td>
<td>1 week</td>
</tr>
</tbody>
</table>

10. **Unit objectives for the teachers should be stated more concretely and in more detail.**

As was done in the first draft of the guide, objectives should be listed under the headings of attitudes, behavior (habits and skills), and knowledge.
11. The essential supplies and equipment that will be needed to teach the resource unit should be listed under suggestions to the teacher.

Some units will require more specialized supplies and equipment than others. One such example would be the unit "Safe and Effective Living," which includes first aid.

12. A problem check list or pretest for each resource unit should be prepared.

The committee revising each unit should decide whether a problem check list or a pretest is most appropriate. All committees are encouraged to do more research in the local junior high schools to determine more accurately pupil health interests.

13. The problem approach should be continued in developing the problem areas within the content section of each resource unit.

14. The facts related to each problem should continue to be outlined.

15. The resource units in which the systems of the body and the senses should be taught should be determined.

Table 5, gives the titles and problem areas of the resource units in which the senses and the systems of the body should be taught. Note, that the senses and systems are listed opposite the problem area or areas in which they are most likely to be discussed.
TABLE 5

RESOURCE UNITS IN WHICH THE SYSTEMS OF THE BODY AND THE SENSES SHOULD BE TAUGHT

<table>
<thead>
<tr>
<th>Unit titles and problem areas</th>
<th>Senses</th>
<th>Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeing and Hearing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Vision and Vision Screening</td>
<td>seeing</td>
<td></td>
</tr>
<tr>
<td>B. Hearing and Hearing Screening</td>
<td>hearing</td>
<td></td>
</tr>
<tr>
<td>Keeping Healthy and Efficient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Eating for Good Health</td>
<td>smelling</td>
<td>digestive</td>
</tr>
<tr>
<td>B. Recreation</td>
<td>tasting</td>
<td>excretory</td>
</tr>
<tr>
<td>C. Rest and Sleep</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Making a Good Impression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Cleanliness of Skin</td>
<td></td>
<td>skeletal</td>
</tr>
<tr>
<td>B. Do your Hands and Fingernails Tell?</td>
<td></td>
<td>muscular</td>
</tr>
<tr>
<td>C. Your Hair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Your Teeth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Is Yours &quot;A Voice to Remember&quot;?</td>
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<td>F. Your Silhouette</td>
<td></td>
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<td>G. How to be Well Dressed</td>
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<tr>
<td>Growing-up Physically</td>
<td></td>
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<tr>
<td>A. Understanding Normal Physical Growth</td>
<td></td>
<td>reproductive</td>
</tr>
<tr>
<td>B. Acquiring Secondary Sex Characteristics</td>
<td></td>
<td>endocrine</td>
</tr>
<tr>
<td>C. Checking Height and Weight</td>
<td></td>
<td></td>
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<tr>
<td>Growing-up Mentally and Emotionally</td>
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</tr>
<tr>
<td>A. Behavior as an Indication of Emotional Growth</td>
<td>touching</td>
<td>endocrine</td>
</tr>
<tr>
<td>B. The Physiology of Emotions</td>
<td>(pressure and temperature)</td>
<td>nervous</td>
</tr>
<tr>
<td>Unit titles and problem areas</td>
<td>Senses</td>
<td>Systems</td>
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<tr>
<td>Safe and Effective Living</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Emergency Care and First Aid</td>
<td></td>
<td>circulatory</td>
</tr>
<tr>
<td>B. Care of the sick</td>
<td></td>
<td>respiratory</td>
</tr>
<tr>
<td>C. Facing Disasters</td>
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<td></td>
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</tbody>
</table>

16. **All resources, including readings, which relate to specific problems should be identified in the "fact-finding column" opposite each content problem.**

17. **Science II references should be removed from the guide.**

   This recommendation implies that the Science II book should be removed from the health science classroom.

18. **More information about how to do suggested pupil activities should be included.**

   For example, the suggestion, "Have pupils keep a notebook," is given in the first draft of the guide, but there are no suggestions as to how to keep notebooks.

19. **More scientific experiments should be incorporated in the activities section of the resource unit.**

   Simple experiments that can be accomplished in a short period of time in the classroom with a minimum of equipment are the most desirable.

20. **A sample health test or tests for the evaluation section of each resource unit should be prepared.**

   The committee responsible for revising or developing each unit will decide on the type of test or tests.
Television tests have been prepared for most of the units and in some cases may be adapted to the revised guide.

21. **Suggestions for pupil evaluation should be made more specific.**

22. **The format of the resource unit should be reorganized in order to reduce the size of the guide and to make the unit more usable for the teacher.**

The new resource unit should consist of the following introductory materials: the unit number, title of the unit, estimated minimum and maximum weeks required to teach the unit, unit status (required, strongly recommended, or optional), an introductory statement about the significance of the unit, teacher objectives, and suggestions to the teacher. These introductory materials will require two pages. Following the introductory materials should be a one page pretest or problem check list.

The body of the resource unit should follow the pretest and should consist of three parts: content, fact-finding and activities columns. (The evaluation column should not appear as a part of the body of the resource unit.) In this revised format, the content should be given a full left-hand page, fact-finding should be given a third of the right-hand page, and pupil activities should be given two-thirds of the right-hand page. The typed length of the body of the resource unit for each unit should be based on the estimated time that it will take to teach the unit. For example, if the unit is to be taught in one week, then the body of the resource unit should run about eight pages. If
the unit is from two to three weeks in duration, the length of the body of the resource unit should be about 14 pages; if three to four weeks, about 20 pages; and if four to five weeks, approximately 26 pages.

The last part of the resource unit should be devoted to suggestions for pupil evaluation. This will consist of one left-hand page on which a health vocabulary, a pupil plan of action, and other specific suggestions for pupil evaluation will be presented. In addition, a sample test or tests will be placed at the end of each unit. The "Outline of the Revised Resource Unit Format" follows.

I. Introductory pages

A. Resource unit number
B. Title of the resource unit
C. Estimated minimum and maximum weeks required to teach the unit
D. Unit status (required, strongly recommended, or optional)
E. An introductory statement
F. Teacher objectives
   1. Attitudes
   2. Behavior (habits and skills)
   3. Knowledge
G. Suggestions to the teacher

II. Pretest or problem check list

III. Body of the resource unit

A. Content
   1. Introduction
   2. Title of problem area or areas
   3. Problems
   4. Outline of facts
B. Fact-finding
   1. Introduction (sometimes)
   2. Fact-finding sources
C. Activities
   1. Introduction (sometimes)
   2. Suggested types of activities
IV. Pupil evaluation

A. Health vocabulary
B. Pupil plan of action
C. Other specific suggestions for evaluation
D. Sample test or tests

23. The size of the guide should be reduced by having it printed, instead of mimeographed.

24. The guide materials should be placed in a loose-leaf binder.

25. An index should be provided in the back of the guide.

26. A new health textbook should be adopted concurrently with the revision of the guide.

27. The terminology used in the guide should be kept in simple terms.

These recommendations are based on the results of the evaluation and represent the considered judgments of the Curriculum Guide Committee. The guide cannot be properly revised without taking these recommendations into consideration.

Suggestions to Other Health Educators for Constructing Curriculum Guides

This study was spread over a period of two years. It involved research, teacher committees, conferences, etc. It would be remiss not to make suggestions for others who may undertake similar projects. The following suggestions are based on observations made by the Curriculum Guide Committee during their participation in the study.

1. Administrative leadership for curriculum development should definitely be provided.
2. Curriculum development is time consuming; however, much time will be saved if a definite plan of action has been determined in advance. Included in this plan of action should be a chronological listing of the steps to be undertaken, a time schedule indicating approximately when each step should be completed, and a breakdown of the various aspects of each step.

3. The research steps used in this study are sound. Each step was important in developing the Health Science guide. Therefore it is suggested that these research procedures be carefully considered when developing a curriculum guide.

4. In examining other curriculum guides it was discovered that a topical approach was used most frequently in organizing content. However, in developing the Health Science guide, the problem-solving approach was used and accepted by health teachers. The problem-solving approach is recommended by the committee over the topical approach.

5. The Curriculum Guide Committee suggests that many people be involved in the process of developing a curriculum guide. Teachers, administrators, counselors, nurses, parents, community consultants, and health authorities made unique contributions to the Health Science guide.

6. Of all these people, the teacher is the key person. He should be involved in every step of the construction
process. He should be very active in selecting and organizing content areas.

7. Individual growth takes place through working with others. The Curriculum Guide Committee suggests that a supervisor is better qualified to assist teachers as a result of having participated in the cooperative development of a curriculum guide. The committee also suggests that a teacher is a better teacher having worked with others in curriculum development.

8. Teachers should be given released time, or time with extra compensation, in which to help with the development of an instructional guide.

9. The Curriculum Guide Committee effectively helped to make decisions concerning the construction of the guide. The committee believes that group decisions should play a very vital part in any project in curriculum research.

10. Other departments in a school system should be called upon for the invaluable assistance they can give in curriculum development. The interest and assistance of other central office departments of the Columbus Board of Education was necessary for the success of this curriculum project.

11. Members of a university or college staff can be very helpful in assisting the public schools with the development of a curriculum guide and thus should be invited to participate. The Ohio State University cooperated fully
with the Columbus Public Schools in developing the **Health Science** guide.

12. The value of surveying and screening health resources should be recognized. Surveying and reviewing health resources is a large and time consuming task which involved in this project, for example, the study of hundreds of printed and graphic materials. In cities the size of Columbus, the local health resources should be surveyed first. For this study there was little need to go beyond metropolitan Columbus since a wealth of health materials were available within the public school system and within the community.

13. The curriculum planner should read continually throughout the research project. There is no substitute for knowledge. Materials about curriculum development will take on added meaning when they are read in relation to a given project.

14. As soon as the first draft of a curriculum guide is ready for release, it should be introduced to all teachers who are to use it. Since the acceptance of a curriculum guide cannot be guaranteed, several introductory techniques should be used to promote its use. A conference, a health problems course, interviews, a special meeting, and written communications were used as techniques for introducing the *Health Science* guide. Continued follow-up in a variety of ways, such as institutes, area meetings, and individual
conferences, is necessary to assure the administration that teachers understand and accept the new curriculum guide.

16. Current happenings on the local and national levels will influence the use made of a new curriculum guide. For example, locally, the Health Science guide was adapted for educational television and nationally the emphasis on science caused some teachers to view the social aspects of the guide more critically. Thus these happenings should be taken into account.

17. The first draft of a curriculum guide should be tested in the classroom before a revision can be made. An organized plan should be formulated for evaluating the guide.

18. The teacher interview, an extremely effective technique to use in evaluating an instructional guide, should be used.

These are only a few of the many suggestions which might be given to others who will be constructing curriculum guides. Writing about what and how to teach will continue to be a fundamental way in which educators can improve the teaching-learning situation; however, the process of curriculum development is only a means to an end, never an end in itself.
APPENDIX A

RESOURCE UNIT
APPRAISING MY HEALTH

INTRODUCTION

Because good health is basic to our success in life, we need to appraise our health at all ages. The teenager is no exception. The family physician is a key person in helping us to determine our health status.

OBJECTIVES

Attitudes

To help teenagers see the need for a health appraisal.
To stress the importance of securing a family physician.

Behavior (habits and skills)

To help teenagers establish regular habits of going to their physician and of appraising their health in acceptable ways.

Knowledge

To help teenagers visualize the steps necessary to protect their health and the health of others.

SUGGESTIONS TO THE TEACHER

Encourage the pupils to have a health examination. The school nurse and teacher should pursue this project cooperatively.

Order pupil pamphlets, leaflets, and folders in advance.

Clear channels for small group visitations and interviews.

Survey the occupations of parents in order to determine if any are members of the medical profession.

Health should be a personal concern to everyone. However, a class in health-science should not become a confession hour.
APPRAISING MY HEALTH

CONTENT

Introduction: Continual appraisal of one's health is essential. A combination of techniques should be used.

Why should we appraise our health?

HEALTH APPRAISALS

1. Why is health important to successful living?
   a. One is more efficient.
   b. One is able to reach goals with less effort.
   c. Good health involves emotional, social, and physical harmony essential for happy living.

2. How can we determine how healthy we are?
   a. Through our own sense of well being.
   b. Through teacher and nurse observations.

ACTIVITIES

Have each pupil start an active health folder to be used throughout the course. Pupils may wish to design their own folder. Manila folders or envelopes could be used.

EVALUATION

What is the value of having an individual health folder? Why is it important to keep it up to date?

HEALTH APPRAISALS

1. What career do you plan to pursue? How does health help you to achieve this goal?

2. Discuss briefly limitations of sensing your own well being. Cite an example, such as failure to notice a gradual loss of hearing.

Teachers are in a position to observe changes in the health appearance and behavior of pupils. Unusual findings should be reported to the school nurse.
<table>
<thead>
<tr>
<th>HEALTH APPRAISALS</th>
<th>HEALTH APPRAISALS</th>
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</thead>
<tbody>
<tr>
<td>c. Through personal health inventories</td>
<td>Divide the class into small committees to determine and list health questions in order to form a personal health inventory. Sample health questions: Am I tired in class? Can I see without difficulty?</td>
</tr>
<tr>
<td>d. Through health examinations</td>
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</tr>
<tr>
<td>(1) Health history</td>
<td></td>
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<tr>
<td>(2) Immunizations and vaccinations</td>
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<td>(3) School screening tests</td>
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</tbody>
</table>

3. What are the reasons for having a health examination?
   a. To relieve worry
   b. To detect problems early
   c. Prevention costs less in the long run in both effort and money
   d. To receive treatment if apparently necessary

4. What important groups require health examinations? Why?
   a. Sports

A small committee might obtain several sample copies of the Ohio High School Athletic Eligibility card, either directly from the Ohio High School Athletic Association or from the administrative offices of your school. See page 90 of this guide.

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>EVALUATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have small committees share their reports with the whole class. Develop a class inventory for checking health.</td>
<td>Determine how pupils rate on the inventory that the group has prepared.</td>
</tr>
<tr>
<td></td>
<td>Summary: What personal health problems do we see from the inventory?</td>
</tr>
</tbody>
</table>

3. Discuss signs and symptoms of poor health.

4. Have committees report on health standards of groups.

3. React in writing to the statement: "If one diagnoses and treats himself, he is a fool."

4. Evaluate committee reports.

Have research group report about the Ohio High School Athletic Eligibility Card and its relation to the health examination.
b. The armed forces  
Several class members might visit Marine, Navy, Army, and Air Force recruiting offices to secure health requirements for enlistment.

c. Insurance companies  
A small group might profitably visit the Health Service Department at Nationwide Insurance. See page 71.

d. State laws for marriages (laws vary from state to state)  
A small committee might visit the Health Service Department at the Administration Building of the Columbus Board of Education to determine how working permits are secured. The committee may also have an opportunity to see a health screening examination.

e. Employers (industry)  
Have the committee that visited the Health Service Department at the Administration Building of the Columbus Board of Education report its findings to the class.

Does the fact that groups are required to have a health examination have any relation to the importance of the examination?

5. Discuss: Is it true that we sometimes do not realize the importance of an examination until we are forced to have it?

When were you to your family physician last?
**HEALTH APPRAISALS**

6. How does one choose a physician?

- Ask your previous family physician before moving to a new town.
- If you don't know any physicians, get in touch with the Medical Society.
- Refer to the classified section of your phone book.
- Ask friends or ministers.
- Get acquainted with a new physician through an appointment.
- Ask the local hospital superintendent.

**FACT-FINDING**

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<tr>
<th>CONTENT</th>
<th>HEALTH APPRAISALS</th>
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<tbody>
<tr>
<td></td>
<td>b. If you don't know any physicians, get in touch with the Medical Society.</td>
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</tr>
<tr>
<td></td>
<td>d. Ask friends or ministers.</td>
</tr>
<tr>
<td></td>
<td>e. Get acquainted with a new physician through an appointment.</td>
</tr>
<tr>
<td></td>
<td>f. Ask the local hospital superintendent.</td>
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</table>

**ACTIVITIES**

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<th>HEALTH APPRAISALS</th>
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<tr>
<td>6. Poster “Your Doctor is Your Friend” See page 105 of this guide.</td>
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**EVALUATION**

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<th>HEALTH APPRAISALS</th>
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<tbody>
<tr>
<td>Discuss advantages and disadvantages in using the directory.</td>
</tr>
<tr>
<td>Discuss the importance of wanting a good physician, but at the same time, the obligation of being a good patient.</td>
</tr>
<tr>
<td>Discuss how your family physician will help you to find a medical specialist when needed.</td>
</tr>
</tbody>
</table>

**HEALTH APPRAISALS**

6.

- Discuss advantages and disadvantages in using the directory.
- Discuss the importance of wanting a good physician, but at the same time, the obligation of being a good patient.
- Discuss how your family physician will help you to find a medical specialist when needed.

**Leaflet:** “Do you Make Par as a Patient,” p.92. Use the rating scale on the back of the leaflet.

**React to this statement:** The physician I visit is excellent because he diagnoses all conditions immediately and he charges a high price for his services.
7. What advantages are there in keeping the same family physician?
   a. Interested in you personally
   b. Knows you well
   c. Has complete health records
   d. Reminds you of certain needs, such as polio shots

8. Who should make appointments with a physician for you?
   a. When you were in elementary school your parents assumed this task.
   b. Now you should begin to share this responsibility with your parents.
   c. Later you will need to assume the whole responsibility.

9. In what ways does a physician learn about you?
   a. Symptoms (those you tell him)
   b. Inspection of you
      (1) Looking
      (2) Feeling
      (3) Tapping

   How might a physician inspect you in each of the ways mentioned under "b" of question 9? (For example: feeling, taking your pulse)
   Booklet:
   "How the Doctor Examines Your Heart," see page 38 of this guide.

   Discuss the ways in which physicians inspect you.

7. Formulate some specific questions to ask the physician before his visit.

   Display, one at a time, six or eight objects which a physician uses in an examination. Ask pupils to identify them. For example: a tongue depressor and a thermometer.
<table>
<thead>
<tr>
<th>CONTENT</th>
<th>FACT-FINDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH APPRAISALS</td>
<td>HEALTH APPRAISALS</td>
</tr>
<tr>
<td>Secure on loan a stethoscope from the Tuberculosis Society of Columbus and Franklin County. See page 107 of this guide.</td>
<td></td>
</tr>
<tr>
<td>c. Personal history record</td>
<td></td>
</tr>
<tr>
<td>d. Immunizations and vaccinations</td>
<td></td>
</tr>
<tr>
<td>e. Tests</td>
<td></td>
</tr>
<tr>
<td>Booklet: &quot;What Everyone Should Know About Doctors&quot; See page 92 of this guide. A complete list of standard tests appears in this booklet.</td>
<td></td>
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</tbody>
</table>

10. What constitutes a complete health examination? 10. Study carefully the "Permanent School Health Record" which the State Planning Committee for Health Education in Ohio has developed. Make special reference to the health examination section of this record. Refer to page 86 for details about the record. Survey the "Cumulative Record" folder of the Columbus Public Schools. A sample record may be secured from the Director of the Department of Pupil Personnel (Ca 8-3621, Ext. 70). Note particularly the "Pre-School and School Medical-Dental Record." Encourage pupils to use this form. |

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<tr>
<th>ACTIVITIES</th>
<th>EVALUATION</th>
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<tbody>
<tr>
<td>HEALTH APPRAISALS</td>
<td>HEALTH APPRAISALS</td>
</tr>
<tr>
<td>Demonstrate the use of stethoscope in class.</td>
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<tr>
<td>Select a few of these tests to discuss with the class.</td>
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<tr>
<td>Discuss the fact that not all standard tests are made at every health examination.</td>
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</tbody>
</table>

10. Discuss the "Permanent School Health Record" with the class. 10. Quiz: Formulate five or six questions that the doctor might ask you about yourself at a health examination. The second part of the quiz might be to answer these questions. Give extra credit to pupils who have a health examination. Place record in "Cumulative Record." The pupil should also add the information to his personal health record. |

Discuss the "Cumulative Record" with the class. Does the word "health" imply both physical and mental health? Why psychological tests are listed on the "Cumulative Record"? Make sure pupils know the difference between a health screening examination and a complete examination. Where is each used? (Schools use only screening examinations.)
### HEALTH APPRAISALS

**11.** What are some of the most important types of information that a family or individual health record contains?

- Record of birth
- Immunizations and tests
- Health examinations
- Illnesses
- Injuries
- Hospital record

**12.** Why is a history of your past illnesses and symptoms, as well as a family history, so important to your doctor?

- Past illnesses and diseases have a bearing upon our present health.
- Past notations are frequently helpful to the physician in diagnosing a current condition.

**13.** What immunizations and vaccinations should you have had?

- Diphtheria immunization
- Smallpox vaccination
- Whooping cough
- Tetanus toxoid
- Polio vaccine

**ACTIVITIES**

**11.** Have pupils write an autobiography of their health history.

**12.** Study carefully the "past history" section of the "Permanent School Health Record."

**13.** Have pupils report orally to the class about immunizations and vaccinations.

**EVALUATION**

**11.** Selected autobiographies may be read in class.

**12.** Discuss with the class the "past history" section of the "Permanent School Health Record."

**13.** Evaluate the oral reports.

**HEALTH APPRAISALS**

**12.** Why is a history of your past illnesses and symptoms, as well as a family history, so important to your doctor?

- Past illnesses and diseases have a bearing upon our present health.
- Past notations are frequently helpful to the physician in diagnosing a current condition.

**HEALTH APPRAISALS**

**13.** What immunizations and vaccinations should you have had?

- Diphtheria immunization
- Smallpox vaccination
- Whooping cough
- Tetanus toxoid
- Polio vaccine

**ACTIVITIES**

**11.** Evaluate the autobiography.

**12.** Discuss with the class the "past history" section of the "Permanent School Health Record."

**13.** Evaluate the oral reports.
### HEALTH APPRAISALS

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>FACT-FINDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. What are some of the health screening tests you may have received in school or as part of the health examination by your family physician?</td>
<td>Have pupils determine what immunizations and vaccinations they have had.</td>
</tr>
<tr>
<td>a. Vision test</td>
<td></td>
</tr>
<tr>
<td>b. Hearing test</td>
<td></td>
</tr>
<tr>
<td>c. Others</td>
<td></td>
</tr>
<tr>
<td>15. Since your personal health relates to others (family and community), what responsibilities do you have for remaining healthy?</td>
<td>Have a small committee determine how many pupils in the eighth grade of their school wear glasses. How did they discover the need for glasses?</td>
</tr>
<tr>
<td>a. So that you won't become a menace to others (society)</td>
<td>A small research committee could interview the nurse as to why screening tests are included as part of the school health service program.</td>
</tr>
<tr>
<td>b. So that you will not be a financial drain upon your family</td>
<td></td>
</tr>
<tr>
<td>c. When you aren't feeling well, you are not as congenial toward others</td>
<td></td>
</tr>
<tr>
<td>15. Find examples where carelessness and ignorance on the part of one person has affected the health of others.</td>
<td>What is the average cost of treating one case of a disease such as tuberculosis?</td>
</tr>
</tbody>
</table>

### VOCABULARY
- health
- health examination
- immunization
- screening examination

*For additional terms refer to the "Permanent School Health Record" State Planning Committee for Health Education in Ohio*

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### ACTIVITIES

14. Have a small committee determine how many pupils in the eighth grade of their school wear glasses. How did they discover the need for glasses?

15. Find examples where carelessness and ignorance on the part of one person has affected the health of others.

15. Report examples.

15. Ask pupils to evaluate the examples presented by other classmates.

### EVALUATION

14. Report findings to the class.

14. Evaluate the presentation of the committee.


15. Evaluate report.
APPENDIX B

IN-SERVICE EDUCATION MATERIALS
PROGRAM FOR THE OCTOBER, 1957, HEALTH SCIENCE CONFERENCE

HEALTH SCIENCE CONFERENCE
October 9, 1957
G. C. Beery Junior High School

2:45-3:00 WELCOME ............ Dr. W. W. Miller
Assistant Superintendent in
Charge of Instruction
Columbus Public Schools

3:00-3:30 "SUGGESTIONS FOR
ACTION" ............ Dr. Delbert Oberteuffer
Professor of Health and
Physical Education
The Ohio State University

3:30-4:30 EXPLORING THE GUIDE
Michael Lower, Principal, Beery Junior High School
Don Richardson, Teacher, Crestview Junior High School
Pat Monnette, Teacher, Barrett Junior High School
Edna Lambert, Teacher, Dominion Junior High School
La Von Shook, Teacher, Dominion Junior High School
Molly Pugh, Teacher, Everett Junior High School
Bob Howard, Teacher, Starling Junior High School
Joy Garrison, Assistant Director of Physical, Health, and Safety Education
Columbus Public Schools

4:30-5:30 DEMONSTRATIONS
SNELLEN EYE TEST.. Ingeborg Blechschmidt
School Nurse, Columbus Public Schools
Emma Harman
School Nurse, Columbus Public Schools

AUDIOMETER........ Walter Bohl
Director of Special Education
Columbus Public Schools

MICROSCOPE AND BIOSCOPE
Charlotte Scofield
Science Teacher, Starling Junior High School
Stephen M. Grinch
Science Teacher, Everett Junior High School
DIABETES TEST ........ Molly Pugh
  Health Science Teacher
  Everett Junior High School

NEW METHOD OF ARTIFICIAL RESPIRATION ........ W. R. Middendorf
  Director of Safety Services
  American Red Cross

5:30-6:30 DINNER ..................
  Toastmaster ........ M. D. Sheatsley
  Director of Physical, Health, and Safety Education
  Columbus Public Schools

6:30-7:00 BUZZ SESSIONS

7:00-7:45 REACTOR PANEL
  Moderator ........ Dr. W. W. Miller
  Resource Members ... Edna Lambert
    Joy Garrison
    Don Richardson
  Consultants ........ Dr. Wesley P. Cushman
    Professor of Health Education
    The Ohio State University
    Dr. Delbert Oberteuffer
    Professor of Physical Education
    P. C. Bechtel
    Assistant Supervisor
    Department of Health, Physical Education, Recreation, and Safety
    Ohio Department of Education

7:45-8:00 BRIEF SUMMARY ........ Dr. W. P. Cushman

CLOSING REMARKS .... Dr. W. W. Miller
SAMPLE HEALTH SCIENCE TELEVISION PROGRAM OUTLINE

PROGRAM 2

September 5, 1958

Unit I  Appraising My Health

I. Definition of "appraising"

II. Importance of appraising our health

III. Objectives of this unit of instruction
     (See Health Science guide, page 167)

IV. Determining how healthy we are
     (See Health Science guide, pages 168 and 170)

V. Reasons for having a health examination
     (See Health Science guide, page 170)

VI. Groups requiring health examinations
     (See Health Science guide, pages 170 and 172)

VII. Introduction of guest: Woody Hayes, The Ohio State University Football Coach

VIII. Interview of guest
     A. Discussion of the O.H.S.A.A. examination card
     B. The significance of the health examination
     C. The need for continually appraising our health
     D. Reasons for keeping healthy
     E. Importance of establishing daily health and work practices
     F. Attitudes toward being a good student

IX. Assignment: "What Everyone Should Know About Doctors"
     (pages 1-6, 8-9, 12-16)
     List six ways of choosing a family physician.
PROGRAM FOR THE AUGUST, 1958, HEALTH SCIENCE INSTITUTE

HEALTH SCIENCE INSTITUTE

August 28, 1958

Linmoor Junior High School

9:00 - 9:15 Greetings ............ M. D. Sheatsley, Moderator

9:15 - 9:30 "Health Science
Point of View" ...... Jerrold Karshner, Speaker

9:30 - 10:15 Previewing of Health
Science Kinescopes .. Carroll Smith, Moderator

10:15 - 10:30 Coffee Break ................. Frank Mason, Host

10:30 - 11:15 Previewing of Health
Science Kinescopes ............. Carroll Smith

11:15 - 11:30 Explanation and Description
of Health Science Materials .. Jerrold Karshner

LUNCH

1:00 - 1:20 Introducing the new
Columbus Public Schools
"Medical-Dental Record" .... Florence Johnston

1:20 - 1:45 Pupil Evaluation in Health Science
Technical Problems of Pupil
Testing by Television ............. Carroll Smith

Teacher Attitudes toward
Testing ........................... Stephen Grinch

Discussion and Summary ........ M. D. Sheatsley

1:45 - 2:00 Use of Television Sets ... John Sittig, Speaker

2:00 - 3:00 Previewing of Health Science
Kinescopes ........................ Carroll Smith
PROGRAM FOR THE SEPTEMBER, 1958, HEALTH SCIENCE CONFERENCE

HEALTH SCIENCE CONFERENCE
September 19, 1958
Linmoor Junior High School

1:15-1:30 Television Report - Hagerstown, Maryland ........ Julia Gump
1:30-1:50 Evaluative Check List ....... Joy Cauffman
1:50-1:55 Grant-In-Aid for Health Science Projects .... Nancy Dahlstrom
1:55-2:35 Effective Pre-television and Post-television Teaching .... Egeva Ohlson
2:35-2:50 Health Science Materials Unit II - Seeing and Hearing . Jerrold Karshner
2:50-3:30 Summary and Discussion Period ........ Television Teachers
PROGRAM FOR THE 1959 MID-YEAR CONFERENCE
FOR HEALTH SCIENCE TEACHERS

MID-YEAR CONFERENCE HEALTH SCIENCE SECTION

January 30, 1959

DOMINION JUNIOR HIGH SCHOOL
(Room 211)

9:15 - 11:15

9:15 - 10:15 ................................ Introduction
Health Science by Television
Moderator, Carroll Smith

10:15 - 10:25 ................................. See Teaching Models, Pupil Notebooks, and Exhibits

10:25 - 10:40 ................................ Discussion of Models, Notebooks, and Exhibits
Moderator, Molly Pugh

10:40 - 11:10 .............................. Sharing of Health Science Teaching Ideas
(demonstrations, experiments, class projects, discussion techniques, etc.)
Moderator, Jim Furgason

Participants
William Nichols
D. E. Sparrow
Molly Pugh
Jim Furgason
Jim Torrie

11:10 - 11:15 ................................. Closing Remarks
APPENDIX C

EVALUATING THE GUIDE
To: Edna Lambert  
Dominion Junior High School  

Subject: Health Science guide  

Today you were kind enough to discuss the revision of the first draft of the Health Science guide with me. It was not possible for us to consider all aspects of the guide. Therefore, this questionnaire was prepared to supplement our conversation.  

Do not feel that you should recognize, or should have used, all of the audio-visual, printed, and graphic materials listed under Questions 1 and 2. Rate only those materials you have used. On the basis of your ratings, certain materials may be eliminated from the guide.  

If you indicate in Question 3 that you have used or know of other excellent audio-visual, printed, and graphic materials, please do not fail to list these resources in Question 4.  

In Question 5, rate the community visitations made by all members of your health science classes(es) or by small research groups.  

If our Health Science guide is to be a useful instructional aid, it is important that you complete the questionnaire at your earliest convenience and return it to me by school mail. Thank you for your cooperation.  

Joy Garrison Cauffman  

JGC:jb
A QUESTIONNAIRE ON THE USE OF THE HEALTH SCIENCE GUIDE
BY EIGHTH GRADE TEACHERS IN COLUMBUS PUBLIC SCHOOLS

1. Rate each of the audio-visual materials that you have used in your health science class.
Place your rating in the parenthesis ( ) provided at the left of each item.
Rating scale: (+) good (-) poor
You may wish to refer to a description of one or more of the films and/or filmstrips you used. To assist you, for those films followed by a number only (25), a description appears in the Columbus Public School "Audio-Visual Aids" catalog or in the Columbus Public School "Audio-Visual Aids Catalog Supplement." For those films or filmstrips identified by a "p." in front of the number (p. 25), a description appears on that page in the Health Science guide.

FILMS

A Chance to Play (p. 56)
About Faces (p. 76)
Act Your Age (p. 52)
Admirals in the Making (p. 59)
A Is for Atom (p. 40)
Am I Trustworthy (p. 52)
Angry Boy (p. 52)
Appreciating Our Parents (2)
Are You Positive (p. 107)
Atomic Alert (p. 79)
Baby Sitter (161)
Bacteria - Friend and Foe (674)
Beginning to Date (702)
Behind the Smile (p. 59)
Bell Solar Battery (p. 72)
Bicycle Safety (224)
Body Fights Bacteria (p. 79)
Career: Medical Technologist (p. 79)
Characteristics of Plants and Animals (488)
Cheating (p. 74)
Children's Emotions (p. 52)
City Water Supply (99)
Clean Waters (p. 80)
Coronary Heart Disease (709)
Date Etiquette (p. 52)
Dating Do's and Don'ts (p. 52)
Dental Health--How and Why (p. 76)
Defense Against Invasion--Vaccination (p. 80)
Developing Friendships (p. 52)
Disaster in the West (p.33)
Does It Matter What You Think (p. 53)
Earning Money While Going to School (1)
Emergency Action to Save Lives (p. 80)
Energy Is Our Business (p. 40)
Everyday Courtesy (p. 53)
FILMS
(continued)

( ) Exploring Your Growth (706)
( ) First Aid on the Spot (p. 53)
( ) Food That Builds Good Health (p. 80)
( ) For Health and Happiness (p. 59)
( ) Fun of Being Thoughtful (71)
( ) Good Sportsmanship (p. 53)
( ) Health Careers (813)
( ) Heart Disease--Its Major Causes (708)
( ) Hemo, the Magnificent (817)
( ) He Acts His Age (p. 53)
( ) How Our Bodies Fight Disease (517)
( ) How the Ear Functions (p. 82)
( ) How to be Well Groomed (p. 53)
( ) How to Catch a Gold (p. 80)
( ) How to Say No (497)
( ) Human Growth--Reproduction (p. 80)
( ) Hurricane Hazel (p. 33)
( ) Importance of Water (264)
( ) It's All in Knowing How (p. 59)
( ) It's Your Health (p. 59)
( ) Johnny's New World (p. 82)
( ) Keep 'Em Out (p. 80)
( ) Lakewood Learns to Live--Safety (p. 85)
( ) Living Unlimited (p. 116)
( ) Making Friends (468)
( ) More Food for Your Money (p. 80)
( ) Nose, Throat, and Ears (p. 82)
( ) Obesity--Problems of Fat Formations and Overweight (p. 53)
( ) One to Grow On (p. 59)
( ) Other People's Property (p. 74)
( ) Our American Crossroads (p. 115)
( ) Overcoming Fear (p. 53)
( ) People, Products and Progress (p. 40)
( ) Pump Trouble (846)
( ) Rabies Can Be Controlled (p. 80)
( ) Responsibility (p. 75)
( ) Right or Wrong (p. 53)
( ) Right to Hear (p. 83)
( ) Rodney (p. 107)
( ) Save Those Teeth (p. 76)
( ) Science and Superstitions (20)
( ) Snap Out of It (p. 54)
( ) Sneeze and Sniffles (p. 81)
( ) Social Courtesy (247)
( ) Something you Didn't Eat (p. 59)
( ) So Much for So Little (p. 81)
( ) Sounds All About Us (443)
( ) Stop Rheumatic Fever (p. 81)
( ) Teeth Are to Keep (p. 59)
( ) The Atoms Comes to Town (847)
( ) The Bully (p. 74)
( ) The Cell (248)
( ) The Fluroidation Story (p. 77)
( ) The Good Loser (p. 74)
( ) The Gossip (p. 74)
( ) The Griper (p. 74)
( ) The Inside Story (p. 107)
( ) The Nature of Sound (44)
( ) The Other Fellow's Feelings (p. 74)
( ) The Outsider (p. 75)
( ) The Procrastinator (p. 75)
( ) The Show-off (p. 75)
( ) The Skeleton (392)
( ) The Story of a Teenage Drug Addict (p. 81)
( ) The Story of Menstruation (p. 54)
( ) Toro's Adventures in Health (p. 77)
FILMS
(continued)

( ) Traitor Within (p. 32) ( ) Your Body During Adolescence (p. 81)
( ) Water Cycle (21) ( ) Your Children's Ears (p. 83)
( ) We Drivers (p. 115) ( ) Your Eyes (285)
( ) What is Science (17) ( ) Your Safety First (p. 115)
( ) What Makes Rain (18) ( ) Your Teeth (253)
( ) Whenever You Eat (p. 60) ( ) You and Your Parents (117)
( ) Why Vandalism? (p. 54) ( ) You Can Beat the A-Bomb
( ) Your Body During Adolescence (p. 81)

FILMSTRIPS

( ) Advertising (F-885) ( ) Making Friends is Easy (F-2302)
( ) Alcohol Part I (F-2580) ( ) Making Water Safe to Drink (F-2586)
( ) Alcohol Part II (F-2581) ( ) Manners at Home (F-690)
( ) Anti-biotics--Disease Fighting Champions (F-2459)
( ) As Others See You (F-316) ( ) Manners at Play--Radio and TV (F-694)
( ) Boy Dates Girl (F-2118) ( ) Manners on the Street (F-692)
( ) Boy Meets Girl (F-2117) ( ) Mechanics of Breathing (F-329)
( ) Care of Feet (F-324) ( ) Lister, Joseph (F-407)
( ) Currie, Madame (F-261) ( ) Narcotics, Part I (F-2582)
( ) Digestion of Foods (F-319) ( ) Narcotics, Part II (F-2583)
( ) Do's and Don'ts of Good Manners (F-693)
( ) Endocrine Glands (F-542) ( ) Nature of Hearing and Hearing Loss (p. 46)
( ) Excretion (F-1469) ( ) Nervous System (F-332)
( ) Foods and Nutrition (F-322) ( ) Nightingale, Florence (F-258)
( ) Give Your Friends a Break (F-2246) ( ) Pasteur, Louis (F-257)
( ) Glandular System (F-1904) ( ) Popularity Comes to You
( ) Heart and Circulation (F-320) ( ) (F-2303)
( ) Heredity (F-2040) ( ) Posture and Exercise (F-327)
( ) Heredity (F-334) ( ) Public Appearance (F-473)
( ) How Hormones Control the Body (F-2306) ( ) Reed, Walter (F-274)
( ) How Vitamins Help Man (F-558) ( ) Rehabilitation of Hard of Hearing (p. 46)
( ) Human Respiration (F-1372) ( ) Reproduction Among Mammals
( ) Jenner, Edward (F-256) (F-326)
( ) Keeping Well and Happy (F-2568) ( ) Safeguarding Food (F-2589)
( ) Last Minute Date (F-2245) ( ) Safeguarding Your Hearing
( ) Little Big Shot (F-2244) (p. 46)
( ) Living Things (F-2109) ( ) Safety on the Street (F-1355)
( ) Sanitation (F-2588) ( ) School Spirit (F-315)
FILMSTRIPS
(Continued)

( ) Table Manners (F-689) ( ) Your Eyes and Their Care (F-321)
( ) Table Talk (F-317) ( ) Your Food (p. 60)
( ) TB Facts (F-2566) ( ) You're in Public (F-2579)
( ) TB--What It Is and What ( ) Water and Its Importance
It Does (F-2565) (F-1206)
( ) Testing Foods and ( ) Water We Drink (F-2586)
Nutrients (F-1909) ( ) What is Digestion (F-1710)
( ) The Long Adventure ( ) Why Have Manners (F-695)
(F-2567) (F-2296)
( ) Trudeau, Edward L. ( ) Worms in Your Muscles
(F-260) (p. 60)
( ) You and Your Grooming ( ) You're in Public (F-2579)
(p. 60) ( ) Water We Drink (F-2586)
( ) You and Your Growth ( ) What is Digestion (F-1710)
(F-2630) (F-1206)
( ) Work of Louis Pasteur
( ) Water We Drink (F-2586)
( ) Why Have Manners (F-695)

DEMONSTRATIONS AND EXHIBIT MATERIALS

( ) Antique Hearing Aids ( ) Signs of Impaired Hearing
( ) Bell Solar Battery and Corrective Measures
( ) Play It Cool ( ) The Miracle of the Telephone
Age

RADIO PROGRAMS

( ) Adventures in Research ( ) Family Circle
( ) Camera on Health ( ) Symptoms of Our Times

SPECIAL AUDIO-VISUAL EQUIPMENT

( ) Filmstrip Projector ( ) Tape Recorder
( ) Movie Projector

SPECIAL LOAN ITEMS

( ) Audiometer ( ) Model of the digestive
( ) Colonies of tubercule system
bacilli in test tubes ( ) Model of the ear
and petrie dishes ( ) Model of the eyeball
( ) Diseased tissue specimens ( ) Model of the heart
( ) Individual food models ( ) Model of the heart and
( ) Lungs in alcohol lungs
( ) Picnic Kits
SPECIAL LOAN ITEMS
(Continued)

( ) A Series of X-rays of Lung cancer
( ) The Ins and Outs Production Packet
( ) Stethoscope
( ) Recording of Sound Patterns
( ) Taking Milk Apart
( ) Recording of Sound of Our Times

Equipment

2. Rate each of the printed and graphic materials that you have used as a resource in your health science class. Place your rating in the parenthesis ( ) provided to the left of each item.
Rating scale: (+) good (-) poor

BOOKLETS AND PAMPHLETS

( ) About Your Blood
( ) Colds and Other Respiratory Diseases
( ) A Calendar for Home Safety
( ) Common Cold
( ) A Girl and Her Figure
( ) Dental Health Guide for Teachers
( ) Diabetes
( ) A New Challenge
( ) Diversions for the Sick
( ) Are You in the Know
( ) Do You Make Par as a Patient?
( ) Arthritis
( ) Eat to Live
( ) A Story of Heart Research—Temples of the Future
( ) Eleventh Avenue Recreation Center
( ) A Third of the Day
( ) Emotional Illness
( ) Attractive Teeth for Teen-Agers
( ) Empty Shoes
( ) Audio-Visual Aids
( ) Epilepsy—The Ghost Is Out of the Closet
Catalog
( ) Eyes That See and Ears That Hear
Back Talk
( ) Eyes - Our Windows to the World
Beatty Recreation Center
( ) Family Health Record
Blood and the Nation's Health
( ) Food and Care for Dental Health
Cancer of the Breast
( ) Forest Trails at Blacklick Woods
Cancer of the Digestive Tract
( ) For Good Teeth
( ) Cancer of the Female Generative Organs
( ) Four Careers
( ) Cancer of the Genitourinary Tract
Growing Healthfully
( ) Cancer of the Mouth and Respiratory Tract
Have Fun - Get Well!
( ) Cancer of the Skin
( ) Health Aspects of the School Lunch Program
( ) Citizens Self-Appraisal of Community Health Services
( ) Heart Diseases
( ) Highway Signs
BOOKLETS AND PAMPHLETS
(Continued)

• Home Health Emergencies
• How To Deal with Your Tensions
• How to Make Homework Lighter
• How the Doctor Examines Your Heart
• If You Lose, You Win!
• Information and Facts About Your Fire Department and What Services It Renders
• Learning to Use Advertising
• Life Adjustment Booklets
• Dating Days
• Getting Along with Parents
• Good Grooming for Boys and Girls
• Growing Up Socially
• Facts About Narcotics
• Understanding Yourself
• What You Should Know About Smoking and Drinking
• You and Your Health
• You and Your Problems
• Where Are Your Manners
• Linden Recreation Center
• Man Against Disease
• My Reflections
• One Hundred and One Questions About Your Child's Heart and Your Own
• Overweight and Underweight
• Poindexter Recreation Center
• Postures on Parade
• Preparing for Medical Social Work
• Pupil Cumulative Record Folders
• Safe at Home
• School and Central Office magazines and pamphlet files

• Science Research Associates Junior Inventory
• Score with Breakfast
• Suggested First Aid Procedures
• Straight from the Shoulder
• Sunshine Recreation Center
• TB Through the Teens
• Teen-age Drivers
• The Gift of Life
• The Long Adventure
• The Physical Educator Asks About Health
• The Profession of Medical Technology
• The Story of Blood
• Through the Looking Glass to Good Grooming
• Traffic Safety Materials from the Columbus Automobile Club
• Vacationing
• Ventures, Voyages, Vitamins
• Ways to Keep Well and Happy
• What Everyone Should Know About Doctors
• What You Should Know About Cancer
• What the Classroom Teacher Should Know and Do About Children with Heart Disease
• When You Should Know About Polio and the Salk Vaccine
• Who--Me?
• Your Family Health Record
HANDOUTS

( ) A Guide to Good Eating
( ) Eat a "Square" Lunch
( ) Ready for Breakfast
( ) Rules for Safe Walking
( ) Rules for Safe Bicycle Riding
( ) Signs of Eye Trouble

LARGE POSTERS OR DIAGRAMS

( ) An Ill Wind that Blows No Good
( ) A Glamorous Miss
( ) A Guide to Good Eating
( ) Be a Star in Your Personal Appearance
( ) Be Fair
( ) Career With a Future
( ) Change of Pace
( ) Clinging Vines Without Hearts
( ) Don't Push Your Luck
( ) Dress for the Weather
( ) Eat a Square Lunch
( ) Facts About Perspiration
( ) Fire - Cause - Prevention
( ) Food Furnishing the Same Amount of Calcium as One Quart of Milk
( ) For Form and Figure Eat Well
( ) For Vim and Vigor
( ) Get Regular Physical Check Ups
( ) Get Your Polio Shots
( ) Good Posture Pays Off
( ) Have Milk and Vegetables at Lunch
( ) How do you Walk?
( ) How to Look Your Best Good Food
( ) How to Catch a Cold Immunize Your Dog Against Rabies
( ) It is Nice to Eat Where Everything is Neat
( ) Jay Walking
( ) Milk Packs a Punch
( ) Partners for Health
( ) Planning a Career?
( ) Read and Reel
( ) Ready for Breakfast
( ) Sleep Tonight
( ) The Best Cure for Poison Ivy
( ) The Rest Is Up to You
( ) The Wheel of Good Eating
( ) To Fight Germs
( ) Too Much of a Good Thing Is No Good
( ) To Youth in Search of Their Future
( ) Treat a Cold Like a Secret
( ) Vacation
( ) Wear Light
( ) Which Lunch is Yours?
( ) You Can Help Yourself
( ) Your Doctor is Your Friend
( ) Your Heart and How It Works

LEAFLETS

( ) About to Choose a Career
( ) A Guide for "Man Against Disease"
( ) A Guide to Good Eating
( ) An Invitation--To Prevent Simple Goiter
( ) Be A Dental Assistant
( ) Beech-Maple Lodge
( ) Bicycling is Great Fun
( ) Blendon Woods
( ) Blueprint for Better Teeth
( ) Breakfast's Ready
<table>
<thead>
<tr>
<th>LEAFLETS</th>
<th>(Continued)</th>
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<tbody>
<tr>
<td>Can You Answer this VD Quiz?</td>
<td>Prayer of the Woods</td>
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<tr>
<td>Caution! Babies Learning</td>
<td>Public Health Sanitarian Record of Vision Tests</td>
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<td>Check Your Food Facts</td>
<td>Sample Audiograms with Suggestions for Advantageous Classroom Seating</td>
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<tr>
<td>Columbus Metropolitan Parks</td>
<td>Six Steps to Survival Solid Facts for Teen-Age Folks</td>
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<td>Columbus Recreation Department</td>
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<td>Conelrad Dietitians in Demand</td>
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<td>Does Your Child Live by Himself</td>
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<td>Enjoy the Forest Trails at Blacklick Woods</td>
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<td>Fears, Fables and Facts About Heart Disease</td>
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<td>Fire Safety Suggestions - Parents and Baby Sitters</td>
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<tr>
<td>Five Facts You Should Know About Heart Disease</td>
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<tr>
<td>Fluoridation of New York City's Water</td>
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<tr>
<td>Food Value of One Quart of Milk (Teacher supplement)</td>
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<tr>
<td>For a Prettier, Peppier You</td>
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<tr>
<td>How to Do the Heart Puzzle</td>
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<td>If Fire Strikes</td>
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<td>Individual Diet Record</td>
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<td>It's a Cold, Cold World Keep Fire Out of Your Home</td>
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<td>Medical-Dental Record</td>
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<td>Mental Health is 1, 2, and 3</td>
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<td>My Growth Chart</td>
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<td>Now You Can Protect Your Child Against Rheumatic Fever</td>
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<td>Occupational Therapy</td>
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<td>Out in the Open</td>
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<td>Policies Governing the Control of Communicable Disease</td>
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<tr>
<td>Posture Teaching Aids for Girls (Teacher supplement)</td>
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</tbody>
</table>
SMALL POSTERS OR DIAGRAMS

( ) A Guide to Good Eating  ( ) Food Value of One Quart of Milk
( ) A Snack Suggestion  ( ) Horizontal Section of a Right Eyeball
( ) Choosing a Career?  ( ) It's Your Heart!
( ) Civil Defense Public Action Signals  ( ) Wanted -- All Boys and Girls Riding Unlicensed Bicycles
( ) Fable and Fact
( ) Foods Furnishing the Same Amount of Calcium as One Quart of Milk

TEXTBOOKS

( ) Building Health  ( ) Into Your Teens
( ) First Aid Textbook for Juniors  ( ) Science II Teen-Agers

3. Have you used other effective printed and graphic materials and audio-visual materials in your health science class(es)?

______ yes  ______ no

4. If yes, please indicate the type, name, and source of the material.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>NAME OF THE MATERIAL</th>
<th>SOURCE</th>
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<tbody>
<tr>
<td>(Examples)</td>
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<tr>
<td>film</td>
<td>&quot;Teens&quot;</td>
<td>Ohio Department of Health</td>
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<td>Division of Public Health Education</td>
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<td>Columbus, Ohio</td>
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<td>leaflet</td>
<td>&quot;How Am I Doing?&quot;</td>
<td>Dairy Council</td>
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<td>Columbus, Ohio</td>
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<td>TYPE</td>
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</table>
5. The following community visitations are suggested in the guide. Naturally, you have not made all, or even most, of these visitations. However, rate each of the visits that you and your pupils have made. Place your rating in the parenthesis ( ) provided at the left of each item.
Rating scale: (+) good (-) poor

**CLASS VISITATIONS**

<table>
<thead>
<tr>
<th>( ) Armour and Company</th>
<th>( ) Ohio School for the Deaf</th>
</tr>
</thead>
<tbody>
<tr>
<td>( ) Borden's Milk Products</td>
<td>( ) Pilot Dog's Incorporated</td>
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<tr>
<td>( ) Columbus Filtration Plant</td>
<td>( ) Sewage Treatment Works</td>
</tr>
<tr>
<td>( ) Columbus Health Department</td>
<td>( ) State School for the Blind</td>
</tr>
<tr>
<td>( ) Columbus Metropolitan Parks</td>
<td>( ) Swift and Company</td>
</tr>
</tbody>
</table>
| ( ) Columbus Recreation Center(s) | ( ) (Others,)
| ( ) Gabel Dairy | ( ) (Please list:)
| ( ) Ohio Department of Highway Safety | |
| ( ) Ohio Fuel Gas Demonstration Kitchen | |

**SMALL RESEARCH GROUP VISITATIONS**

<p>| ( ) Alcoholic Anonymous Office | ( ) Physically Handicapped Classes |
| ( ) American Cancer Society Office | ( ) Sight Saving Classes |
| ( ) Benjamin Franklin Clinic | ( ) F &amp; R Lazarus and Company |
| ( ) Central Office Heart Association Office | ( ) Modeling Department |
| ( ) Columbus Automobile Club Office | ( ) Headquarters for the Columbus Recreation Department |
| ( ) Columbus (neighborhood) Fire House | ( ) Herman Falter Packing Company |
| ( ) Columbus Health Department Research Laboratory | ( ) Metropolitan Health Council of Columbus and Franklin County Office |
| ( ) Columbus and Franklin County Hearing and Speech Center | ( ) Nationwide Insurance |
| ( ) Columbus (neighborhood) Police Station | ( ) Health Service Department |
| ( ) Columbus Public Schools Braille Classes | ( ) Ohio Department of Health |
| ( ) Deaf Classes | ( ) Division of Public Health Offices |
| ( ) Department of Radio and Audio-Visual Education | ( ) Hearing and Vision, Conservation Unit Office |
| | ( ) Ohio Department of Mental Hygiene and Correction |
| | ( ) Division of Mental Hygiene Office |</p>
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APPENDIX D

GLOSSARY
GLOSSARY OF TERMS USED IN
THIS RESEARCH STUDY

aim: a broad and ultimate end or goal.

authoritative method: a dictatorial way of teaching in which the teacher expects unquestioning obedience from her pupils. There is no opportunity for freedom of pupil judgment or action.

community resources: resources available within metropolitan Columbus, but exclusive of the schools.

correlated pattern of health instruction: in the relation of parts to parts, a co- or shared relationship between them. The correlated pattern of health instruction implies that health material is included in the teaching of other subjects, such as physical education, home economics and general science.

course: a series of instructional units in a subject.

course of study: a series of sequential syllabuses, all within the same general area.

curriculum: the total programs of studies that a school offers.

Curriculum Guide Committee: the committee responsible for directing the development of the Health Science guide. Committee members were six outstanding teachers, the director of publications and public information, the school physician, and the assistant director of physical, health, and safety education.

developmental method: a democratic way of teaching in which the teacher guides pupils so that they may have certain learning experiences which will help them to reach personally and socially acceptable objectives.

developmental task: a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to
unhappiness in the individual, disapproval by the society, and difficulty with later tasks.

direct pattern of health instruction: a pattern without divergent or competing interests. Health is the subject to be taught. The direct pattern of health instruction implies that a specific effort is made to teach health.

evaluation: to appraise something according to a set of values.

evaluative process: the process of determining the extent to which values are achieved, purposes carried out, and goals reached.

health authority: an individual who possesses much knowledge and experience in the field of health. This person's opinion is considered to be very reliable.

health education: that part of the school health program which provides teaching and learning experiences and activities for the purpose of favorably influencing knowledge, behavior, and attitudes pertaining to individual and group health.

health problem: a problem proposed for solution or consideration which relates to health.

health problem area: a series of problems relating to one area of personal and/or community health.

health science: that branch of science that deals with the physical, mental, emotional, and social well-being of man.

health science point of view: a statement of basic principles or beliefs regarding health.

Health Science Revision Committees: small committees consisting of from 3 to 5 members organized for the purpose of revising the resource units in the Health Science guide. Committee members are teachers, principals, nurses, dental hygienists, hearing and sight conservationists, librarians and community consultants.

health services: that part of the school health program which provides for the following health activities: first aid in emergencies, prevention and control of communicable diseases, health appraisal and health counseling.
integrated pattern of health instruction: integration is the result of a process, a process of relating parts of a thing to the whole or to a single purpose. The integrated pattern of health instruction implies that the development of an understanding of health is achieved as it relates to contemporary problems in our society.

interests: the sources of spontaneous and outspoken curiosity about problems.

needs: strong individual tensions that have a compulsion to be released.

objective: a specific and an immediate goal.

Parent Consultant Committee: a committee consisting of a health representative from each of the Columbus Junior High School Parent-Teacher Associations. These representatives assisted in identifying pupil health problems and community health resources. They also reacted to controversial issues related to health science instruction.

persistent life situations: those situations that reoccur in the life of the individual in many different ways as he grows from infancy to maturity.

principles: important concepts and fundamental truths in curriculum development.

problem: a situation that causes some anxiety and for which there is no ready answer. The solution to a problem requires research and thinking.

problem-solving procedure: a planned attack upon a difficulty or perplexity for the purpose of finding a satisfactory solution.

provisions for healthful school living: that part of the school health program which provides for a healthful school environment through attention to maintenance and improvement of the school plant and through attention to the effects of the total curriculum upon the total health of all school personnel.

resource consultant: a resource person who gives professional or technical advice to the health science teacher, but does not take part in classroom activities.

resource participant: a resource person who visits and takes part in classroom activities.
resource unit: a broad collection of suggested learning activities and materials organized around one or more given topics.

school health program: all health activities which are planned, organized, and conducted by the school and are under the jurisdiction of the school.

subject: any of the various courses of study offered in a school or college.

subject matter: facts, items of information, rules, definitions, principles, generalizations, objects, or materials needed to attain desired ends in knowledge, attitudes, and behavior (habits and skills). Subject matter is what is used in discovering the truth and in solving a problem.

syllabus: an outline of a single course, such as health science.

synopsis: a statement giving a brief general review or condensation. A summary is a synopsis.

teaching unit: a teacher's lesson plans for a given problem area.

Television Planning Committee: a committee of teachers and the assistant director of physical health and safety education who are responsible for planning the health science television lessons.
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I, Joy Garrison Cauffman, was born in Blanchester, Ohio, May 25, 1927. I received my elementary and secondary education in the Blanchester Public Schools. In 1944, after graduating from Blanchester High School, I enrolled at the Ohio State University. In 1948, I received my Bachelor of Science degree in Health and Physical Education from this university. During the fall of 1948, I accepted a teaching position in the public schools of Kenton, Ohio. For three years I taught health and physical education in the Kenton Junior and Senior High Schools. In 1951, I returned to the Ohio State University to pursue a Master of Arts degree in physical education. While in residence, I served as a graduate assistant in physical education at University School. In the winter of 1953, I received my Master of Arts degree. In the spring of 1953, I taught science and physical education at Morrow Junior and Senior High School. During August, 1953, I was appointed assistant professor of health and physical education at Central Michigan College. For two years, including summers, I supervised student teachers in elementary physical education at Central. In August, 1955, I again returned to Columbus, Ohio, this time to accept the position of assistant director of physical, health, and safety education in the Columbus Public Schools. While holding this appointment, I completed the requirements for the degree Doctor of Philosophy.