INTERRELATING SELECTED ASPECTS OF HOME ECONOMICS

AND PHYSICAL EDUCATION FOR A HEALTH

PROGRAM IN THE MIDDLE SCHOOL

AT THE SIXTH GRADE LEVEL

By

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CHAPTER I

INTRODUCTION

The middle school movement is widespread and it seems to be on the
threshold of even greater growth (Hunt et al., 1970). Such investiga-
tors as the Educational Research Service of the National Education
Association (1969), Murphy (1965), Cuff (1967), Brod (1966), Alexander
(1968), and Hunt et al. (1970) have shown that the reorganization of the
school ladder focused on the middle grades has proceeded at a rapid
rate. The middle school is not a mere mechanical rearrangement of
grades, but is a careful integration of an educational program resulting
from cultural forces, mental, emotional, and physical growth factors,
together with administrative variables, guidance activities and teaching
requirements. The middle school is seen as an organic whole with all of
the relevant factors focusing upon the growth of the child (Eichhorn,
1966).

Grooms (1967) identifies the middle school as the administrative
unit following the elementary and preceding the secondary school. The
middle school is a system of education developed for the ten to
fourteen-year-old age group. Emphasis is directed primarily neither
toward the acquisition of skills as in the elementary school nor toward
the ultimate specialization of the high school. Rather, its emphasis is
upon the support of the student in the learning situation as he ascer-
tains his capabilities for learning and for orientation to his

environment in light of his developing physical, social, intellectual, and psychological attributes.

## Statement of the Problem

Home Economics in the middle schools for Oklahoma City Public Schools has not, as yet, been identified and the possibilities for experimentation are open. Course content must be developed after which can come textbooks, materials, and packets.

Specifically, the problem was to develop a curriculum interrelating selected aspects of home economics and physical education in the area of health that is compatible to the total middle school program for sixth grade students at Rogers Middle School in the Oklahoma City Public School System.

## Significance of the Study

The curriculum plan of a middle school according to Alexander and Williams (1965) should consist of a planned program in three phases: Learning Skills, General Studies, and Personal Development. Every pupil should be scheduled into each of the three phases each year in school. The time requirements and the nature of the work in each phase should vary for individual pupil programs. The general plan is as follows:

(1) Learning Skills Phase: Continues and expands basic communicational and computational skills development begun at the primary school level, with increasing emphasis of use of library tools and skills of independent study. Skills for emphasis are identified and included along with content goals in each unit of work in all General Studies areas. A remedial program of skills development is conducted in special laboratory centers.

(2) General Studies Phase: Includes those learning experiences which give the learner a heightened awareness

of his cultural heritage and those other common learn-
ings essential to civic and economic literacy. Content
would be focused on major concepts and unifying themes
drawn from the areas of literature, social studies,
mathematics, science, and fine arts. Some of the
instruction in this phase might be in groups of up to
100 pupils.

(3) Personal Development Phase: Includes those experiences
which fulfill personal and remedial needs, permit
exploration of personal interests and promote physical
and social growth; health and physical education geared
to the 10-14 year old; individually planned experiences
in foreign languages, typing, technical training, music,
art, dramatics, journalism; student managed enterprises;
community work projects; advanced work in science,
mathematics, and other areas of individual special
competence and interest (Alexander and Williams, 1965,
p. 221).

Home Economics is found in the middle school curriculum under vari-

ous titles and in combination with a variety of subjects. Grooms (1967)

places home economics in the unified area program with woodworking,

ceramics, fine arts, and music. Eichhorn (1966) includes home eco-

nomics in the "physical cultural curriculum" along with fine arts,

physical education, practical arts, and cultural studies. Alexander

(1965) considers home economics as a part of the personal development

area and relates it to the individual student's development as a person.

Moss (1969) stresses the importance of health education and physical

fitness and places home economics in this area. He suggests the curric-

ulum should be health education oriented and include body care, heredity

and reproduction, human behavior, sex education, alcohol, narcotics, and

nutrition information.

Oklahoma City opened its first middle school, Rogers, in September,

1969. During the school year 1971-72 two junior high schools moved

their seventh and eighth grades into a middle school organization. On

February 1, 1972 United States District Judge Luther Bohanon adjudged,

ordered and decreed:

> . . . The Defendant School Board and the individual members
> thereof, both present and future, together with the Superin-
> tendent of Schools, shall implement and place into effect
> beginning with the school year 1972-1973 A NEW PLAN OF
> UNIFICATION FOR THE OKLAHOMA CITY PUBLIC SCHOOL SYSTEM which
> embodies the principles and suggestions contained in the
> Plaintiff's Plan attached hereto and incorporated herein by
> references. The court specifically approves the plan for
> the senior high schools, junior high schools . . . (p. 22).

> Plaintiff's Plan . . . At the junior high level, we propose
> to change the grade structure from 7-8-9 to 6-7-8. This
> is in line with a growing trend of establishing junior high
> school type experiences for 6th grade children. The estab-
> lishment of these middle or junior high school units should
> provide an improved educational experience . . . (Case #9452,
> 1972).

At the beginning of the school year 1972-73 some, if not all, of

the junior high schools in the Oklahoma City Public School system will

become middle schools with a grade combination of 6-7-8. It has been

proposed that home economics be a part of the school curriculum all

three years, from nine to eighteen weeks at each grade level as it pres-

ently is being offered at Rogers Middle School.

Rogers Middle School serves sixth, seventh, and eighth grade stu-

dents between the ages of ten and fourteen. The school's philosophy,

formulated informally by the teaching staff, is:

> If you want a student to know something, tell him. If you
> want him to understand something, lead him to discover the
> answer for himself. The responsibility for learning must
> be placed more and more on the student (unpublished
> statement).

The curriculum emphasizes a general studies block that combines

social studies, science, mathematics, and language arts. A wide selec-

tion of electives is offered at the seventh and eighth grade levels;

these include foreign language, industrial arts, home economics, physi-

cal education, vocal and instrumental music as well as art, speech and

drama.   In all of these, much emphasis is placed on the discovery method and the student's responsibility for learning, as indicated in their informal statement of philosophy.

The student-centered approach is provided at Rogers Middle School through team teaching, independent study, flexible modular scheduling, and inquiry techniques that put the responsibility for learning more directly upon the student.   Efforts are made to meet the learning needs of the students.

Home Economics is required for all sixth grade boys and girls for a nine-week period.   The tentative curriculum is health oriented with emphasis on physical growth, personal grooming, and nutrition.   Physical Education is required for all sixth grade boys and girls for a nine-week period and is presently oriented toward physical development activities.

It is this writer's belief that a program interrelating home economics and physical education at Rogers Middle School can help the pre-adolescent understand what is happening to him physically and emotionally.   A program relating the concepts of nutrition with physical growth and activity, posture with good grooming, good sportsmanship, and the formulation of attitudes toward others, are a few examples of curriculum content that could be interrelated.

Purpose of the Study

The purpose of this study was to develop, implement, and evaluate a curriculum interrelating selected aspects of home economics with selected aspects of physical education for a health program at the sixth grade level in Rogers Middle School.   Since the curriculum was oriented toward physical, emotional, social, and mental health, home economics

and physical education were chosen to be interrelated due to similarity
of course content in the area of health.

## Objectives of the Study

It was the intent of this study to develop a curriculum interre-
lating selected aspects of home economics and physical education for a
health program in Rogers Middle School at the sixth grade level.

Specific objectives were:

(1) To assess the emotional, social, and mental health needs
of the sixth grade students at Rogers Middle School.

(2) To develop a curriculum interrelating selected aspects
of home economics and physical education for a health
program, based on the needs as assessed for the sixth
grade students at Rogers Middle School and the
physical health needs as determined through a study by
Gesell and Ilg (1956).

(3) To implement the developed curriculum with sixth grade
students at Rogers Middle School.

(4) To evaluate the success of the curriculum which had
been developed and implemented.

(5) To recommend curriculum changes and revisions based on
the evaluation.

## Delimitation

The study was limited to (1) the development of curriculum materials
for a nine-week unit, (2) the emotional, social, and mental health needs
of the sixth grade students at Rogers Middle School as assessed through a

self-esteem inventory and an interest inventory, (3) the physical health
needs of the students were based on the physical maturity traits of ten,
eleven, and twelve-year-olds as stated by Gesell and Ilg (1956) as well
as the interest inventory, (4) the interrelating of selected aspects of
home economics and selected aspects of physical education, (5) the
implementation of the curriculum for one nine-week period involving 82
sixth grade students, and (6) the evaluation of selected objectives of
the curriculum through a pretest and posttest administered to the
students.

<div align="center">Description of the Sample</div>

The sample consisted of 82 sixth grade boys and girls enrolled in
home economics the last nine weeks of the school year 1971-1972 at
Rogers Middle School in Oklahoma City, Oklahoma. The students had pre-
viously attended eight elementary schools which served as feeder schools
to Rogers. The boys and girls are from varied ethnic groups including
Latin American, Blacks, Caucasian, and a few American Indians. The eco-
nomic status of the families of the students ranged from upper middle to
low income. At the time of enrollment in September, 1971, the ages of
the students ranged from ten through twelve. All students are enrolled
in the general studies core, which includes language arts, science,
social studies, and mathematics. In addition, they have had experiences
in art, music, industrial arts, foreign language, and nine weeks of
physical education.

<div align="center">Assumptions</div>

The study was planned and conducted on the basis of the following

underlying assumptions:

(1)   Home economics and physical education have complementary

content areas and can be interrelated.

(2)   A group of educators representing home economics, physical

education, and administration can develop a curriculum

that will be interdisciplinary.

(3)   An inventory can be used to ascertain the needs of stu-

dents in the middle school in relation to emotional,

social, and mental health.

(4)   Evaluation through a pretest and a posttest, based upon

the behavioral objectives identified for the curriculum,

is a process of determining to what extent these objec-

tives have been met.

## Definition of Terms

Definitions were formulated and adapted from the educational liter-

ature that was reviewed as background information for conducting the

study.  For the purpose of this study, the following terms are defined:

Middle School - "A school unit which follows the elementary unit

and precedes the high school unit; includes students from grades

six, seven, and eight of the graded school organization"

(Grooms, 1967).

Curriculum is the organizing of an instructional plan inte-

grating the needs and interests of students with planned

educational experiences.

Evaluation is the process of gathering and weighing evidence

in order to ascertain the extent to which behavior has changed.

Maturity Traits are behavior patterns and guidance problems

which occur at a given age zone (Gesell and Ilg, 1956).

Objective is used in the behavioral sense as "an intent

communicated by a statement describing a proposed change in

a learner--a statement of what the learner is to be like

when he has successfully completed a learning experience"

(Mager, 1962, p. 3).

A Learning Experience is an educational experience of a

student, either passive or active, which is designed to

lead to his attainment of educational objectives.

<div align="center">Procedure</div>

A detailed description of the procedure used in conducting the

research for the study is found in Chapters III and IV.  It is summar-

ized in the following paragraphs.

To furnish background for the study, the review of literature was

related to middle schools, curriculum development, evaluation, home

economics, physical education, health, and maturity traits of

preadolescents.

The emotional, social, and mental health needs of the sixth grade

students at Rogers Middle School were assessed through a self-esteem

inventory developed and tested by the Department of Research and Statis-

tics at Oklahoma City Public Schools.  The inventory was administered to

students enrolled in the sixth grade by the counseling staff at Rogers.

Norms set up by the Department of Research and Statistics at Oklahoma

City Public Schools were used to analyze the results of the inventory.

The self-esteem inventory consisted of forty-eight statements.

Twenty-four statements applied to the emotional health, eight statements to the social health and eight statements to the mental health of the students in relation to how he perceived himself. Eight statements were of a lie skill nature to determine the reliability of the student's answers. The students indicated "like me" or "unlike me" reflecting how he perceived himself. The physical health needs were based on the physical maturity traits of ten, eleven, and twelve year olds as stated by Gesell and Ilg (1956). These include physical development, grooming, posture, rest, diet, and nutrition.

A team composed of the two home economics teachers, the boys' physical education teacher, the girls' physical education teacher, the school nurse, the principal, and the assistant principal assisted in the development of the curriculum. All of the team members were at Rogers during the school year 1971-72 and had been on staff at Rogers for one or more years. Since the curriculum was based upon the interrelationship of selected aspects of home economics and selected aspects of physical education in physical, emotional, social and mental health, teachers representing home economics and physical education were members of the team for this special program for Rogers Middle School. The four teachers were the only ones involved in the teaching of home economics and physical education to sixth grade students. The school nurse assigned to the school assists in the health programs for the total school body; therefore, she was asked to serve as a member of this particular team. The principal and vice principal participated as team members to assist the interdisciplinary team with the administrative aspects of implementation.

The team met weekly from October, 1971, through February, 1972.

The researcher accepted the process of curriculum development stated by
Taba (1962). The curriculum was developed through the process of (a)
diagnosing needs of the students, (b) formulating specific objectives,
(c) developing evaluation, (d) analyzing and developing learning expe-
riences, (e) implementing and testing output, and (f) changing to
improve.

After the development, and before implementation, the curriculum
was reviewed by a group of curriculum specialists. These specialists
were asked to review and evaluate the curriculum for its validity and to
make suggestions they might have for implementation of the curriculum.
From the Oklahoma City Public Schools, the review committee consisted of
the Curriculum Director, the Physical Education Consultant and the Home
Economics Consultant. In addition, the researcher secured six curricu-
lum specialists, outside the Oklahoma City Schools, who were representa-
tive of physical education, health, and home economics, to review and
evaluate the curriculum. These specialists were chosen because of their
expertise in their field and their work with middle schools either
through conducting in-service education and workshops for teachers,
development of materials or published articles.

Eighty-two sixth grade students who were enrolled in home economics
and physical education the spring semester of 1971-1972 at Rogers Middle
School were instructed using the curriculum. The team of teachers in-
volved in the instruction and evaluation were the four teachers who
served on the team to develop the curriculum.

Evaluation of the success of the curriculum was done through a pre-
test and posttest based upon selected behavioral objectives identified
for the curriculum and implemented through the teaching. The statistical

t test was used to find out the correlation between the pretest and the posttest mean comparisons.

At the conclusion of the implementation and the evaluation of the curriculum, the data were interpreted and discussed in terms of success of the curriculum.

## Organization of the Study

In Chapter I is found the significance of the study, a statment of the problem, the purpose, a list of the delimitations, and the assumptions of the study. Terms used in the study are defined and an overview of the procedure and organization of the study are included.

An overview of the related literature and research that served as the theoretical background for the study is presented in Chapter II and provides a rationale for this developmental study. The procedure for the development of the curriculum is presented in Chapter III and the implementation and evaluation of the curriculum along with the interpretations of the findings are presented in Chapter IV. The summary of the study, conclusions, recommendations, and implications will be given in Chapter V.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The special needs of youth in the early stages of adolescence have
been recognized by school planners since the turn of the century. The
emergence of the junior high school around 1910 was the beginning effort
of educators to help bridge the gap between elementary and high school.
Although the junior high school has grown steadily, to about 8000 in
1969, it has never been universally accepted (Educational Research,
1969). Within recent years, a new concept has been proposed to meet the
needs of the adolescent. This new concept is called "The Middle School".

History and Growth of the Middle School

The name given to the institution for the three years between
elementary and high school was unfortunate, "junior" implies a scaled-
down version of a "senior" counterpart. The major fault of the junior
high school is that it has become a mimic of the senior high school,
complete with varsity athletic teams, pep rallies, marching bands,
cheerleaders, class proms, and even graduation exercises. The purpose
of the junior high school in the beginning was to provide (1) a bridge
between the elementary school and its self-contained classroom and the
specialized subject-field program of the high school, (2) exploratory
experiences to aid youngsters in selecting a specific program in the

high school, and (3) academic, vocational, and personal guidance. Had

the junior high school fulfilled these purposes and the elementary

school recognized the need for a program for its older students, there

might have been no need to challenge the 6-3-3 plan as educators now are

doing (Compton, 1968).

The oldest middle schools were first reported in 1950, two in

Bay City, Michigan, and one in Baldwin Park, California (Educational

Research, 1969). Cuff (1967) in the 1965-66 school year survey, found

499 middle schools in 29 states; and a study by Alexander (1968) made in

the school year 1967-69 located 1,100 middle schools in 37 states. The

1968-69 school year survey, conducted by Hunt and Berg (1970), identifies

1,946 middle schools in 38 states, of which 821 contained only grades

seven and eight while 420 had grade combinations five, six, seven, and

eight, and 705 combined six, seven, and eight. A survey conducted by

Kealy (1971), during the school year 1969-70 in which he defined a middle

school as "a school having at least three grades but no more than five

grades and including grades six and seven", listed 2,298 middle schools

in 48 states. It is apparent from these figures that the middle school

movement is gaining momentum and will probably show increased growth in

the near future.

Williams (1968, p. 105) has summarized the middle school movement

in the following:

> More than 1,100 middle schools were identified in a
> 1967-1968 survey of the status of the movement. Over 90
> per cent of these schools were established in the last
> decade. Many more are in the planning stages.
>
> New books about the middle school are appearing at the
> rate of one every four months. A host of journal articles,
> pamphlets, and monographs have been appearing with increasing
> frequency since 1963.

The programs of the national conventions of major professional associations, such as the Association for Supervision and Curriculum Development, the National Association of Secondary School Principals, and the Association of Childhood Education International, have recently been expanded to include sections devoted to the study of the middle school. Regional education laboratories, state departments of education, local school districts, and other educational agencies have conducted numerous conferences and workshops on the middle school theme during the past three or four summers as well as during the academic year.

Beginning efforts to modify teacher education programs are under way on several college campuses. Year-long institutes funded by the USOE for the preparation of middle school teachers have been conducted on the campuses of at least two major universities--The University of Florida and Temple University.

## Description of the Middle School

The middle school, which many school systems are now adopting,

appears to be a promising innovation that means different things to dif-

ferent people. To Alexander (1968) it is

> ... a school providing a program planned for a range of older children, pre-adolescents, and early adolescents that builds upon the elementary school program for earlier childhood and in turn is built upon by the high school's program for adolescents.

Good's _Dictionary of Education_ (1959) defines the middle school as

> ... the school administrative unit on the secondary level containing the grades that follow the elementary and precede the last unit in the school system; the term usually applied to the middle unit of the 14 grade program such as the 6-4-4 plan.

Grooms' (1967) interpretation identifies the middle school as

> ... the administrative unit following the elementary and preceding the secondary school. The middle school is a system of education developed for the ten to fourteen-year-old age group. Emphasis is directed primarily neither toward the acquisition of basic skills as in the elementary school nor toward the ultimate specialization of the high school. Rather, its emphasis is upon support of the student in the learning situation as he ascertains his capabilities for learning and for orientation

to his environment in light of his developing physical, social, intellectual, and psychological attributes.

Eichhorn (1966) includes the grade level in his definition of the middle school. He states that the middle school is "a school unit which follows the elementary unit and precedes the high school unit; includes students from grades six, seven, and eight of the graded school organization."

From these various interpretations and definitions, it can be concluded that the middle school is most frequently a school unit providing for special needs of students ranging from ages ten through fourteen. It is not possible to describe the middle school specifically; however, Compton (1969, p. 24) has listed the following common elements among the present day middle schools:

(1) Articulation with the elementary school to assure easy transition for youngsters. This may necessitate a pseudo self-contained classroom approach part of the day for the first middle-school year.

(2) Team teaching by specialists in closely-related areas of general knowledge--English language, literature, history, geography, economics, anthropology, science, art, and music.

(3) Skills laboratories staffed by technologists with subject-matter competencies to provide remedial, developmental, and advanced instruction in such skills as reading, listening, writing, mathematics, science, foreign language, art, music, industrial arts, home economics, and physical education.

(4) Independent study for all students, commensurate with the topic selected for study and the student's needs, interests, and abilities.

(5) A home-base group assigned to a teacher trained in guidance and counseling.

(6) Activities based on the personal development of students rather than on enhancing the school's prestige or public entertainment.

(7) A plan for vertical school organization providing for continuous progress of students.

(8) Evaluative techniques in light of individual progress, rather than in terms of some illusive "average" for a chronological age group.

(9) A program tailored to the needs of each student, with individualized schedules.

(10) An instructional and administrative staff with an understanding of the in-between-ager, competence in teaching at least one subject area, and a genuine desire to provide the best possible program for these students.

Middle School Concept

This concept of providing for the special needs of the ten-to-fourteen age group, easing the transition from childhood to adolscence, and bridging the gap between the self-contained elementary school and the departmentalized high school is at the heart of what makes a school a middle school.

Inherent in the middle school concept are the following distinguishing features:

(1) A span of at least three grades to allow for the gradual transition from elementary to high school instructional practices (must include grades 6 and 7, and no grades below 5 or above 8).

(2) Emerging departmental structure in each higher grade to effect gradual transition from the self-contained elementary classroom to the departmentalized high school.

(3) Flexible approaches to instruction: team teaching, flexible scheduling, individualization of instruction, independent study, tutorial programs--and other approaches aimed at stimulating children to learn how to learn.

(4) Required special courses, taught in departmentalized form, such as industrial arts, home economics, foreign language, art, music, and typing. Frequently an interdisciplinary approach is used, e.g., 'unified arts,' 'humanities,' 'performing arts,' or 'urban living.'

(5) Guidance program as a distinct entity to fill the special needs of this age group.

(6) Faculty with both elementary and secondary certification or some teachers with each type (until special training and certification are available for this level.)

(7) Limited attention to interschool sports and social activities (Educational Research, 1969, p. 2).

Not all of the proponents of the middle school would completely agree with this list; they may find it too narrow or too broad. Most of the items would require on-the-spot verification before it could be said that a particular school does or does not measure up.

## Purpose of the Middle School

While the concept of the middle school is rooted in the educational atmosphere it can provide for the early adolescent child, often the institution of a middle school is the result of a more practical need; for example, overcrowded conditions of nearby elementary schools have necessitated shifting one junior high grade to the senior high school and one or two elementary grades to the junior high. At times, too, middle schools fed by several elementary schools have been established to increase integration.

These, and other factors, were found in a survey of middle schools conducted in 1967-1968 by Alexander (1969) which included a checklist of reasons for the establishment of 110 middle schools in a 10 percent random sample. His query yielded the following ranking of reasons (each respondent could check as many reasons as were appropriate).

| Reason | Schools Reporting | |
|---|---|---|
| | No. | % |
| To eliminate crowded conditions of other schools. | 64 | 58.2 |
| To provide a program specifically designed for students in this age group. | 49 | 44.6 |
| To better bridge the elementary and high school. | 44 | 40.0 |
| To provide more specialization in grades five and/or six. | 33 | 30.0 |
| To move grade nine into the high school. | 27 | 24.5 |
| To remedy the weaknesses of the junior high school. | 27 | 24.5 |
| To try out various innovations. | 25 | 23.6 |
| To utilize a new school building. | 23 | 20.9 |
| To use plans that have been successful in other school systems. | 14 | 12.7 |
| To aid desegregation. | 7 | 6.4 |
| Other | 13 | 11.8 |

(Alexander, 1969, p. 355).

The purposes of the middle school, as summarized by Alexander et al. (1968, p. 19), are as follows:

(1) To serve the educational needs of the 'in-between-agers' (older children, pre-adolescents, early adolescents) in a school bridging the elementary school for childhood and the high school for adolescence.

(2) To provide optimum individualization of curriculum and instruction for a population characterized by great variability.

(3) In relation to the foregoing aims, to plan, implement, evaluate, and modify, in a continuing curriculum development program, a curriculum which includes provision for: (a) a planned sequence of concepts in the general education areas; (b) major emphasis on the interests and skills for continued learning; (c) a balanced

program of exploratory experiences and other activities and services for personal development; and (d) appropriate attention to the development of values.

(4) To promote continuous progress through and smooth articulation between the several phases and levels of the total educational program.

(5) To facilitate the optimum use of personnel and facilities available for continuing improvement of schooling.

The middle school is a promising innovation for providing variations in instructional patterns to meet the varying learning styles and rates of children between the ages of ten and fourteen  The middle school is more than buildings and facilities; it is an idea, a concept, a belief that such a school can best educate the "in-between-ager" who needs a special kind of attention, teaching, and learning which is planned for them (Hansen and Hearn, 1971).

<div align="center">Curriculum in the Middle School</div>

Alexander et al. (1968) suggests that each middle school should have its own planned program of learning opportunities, that is, its own curriculum plan.  The middle school is viewed as one uniquely arranged to serve the educational needs of a population exhibiting a very wide range of differences on many traits.  The flexibility required for serving such a population in a particular school is bound to result in a pattern of learning opportunities that is different from the pattern developed by another faculty for another school.  It is especially necessary for the program of a particular middle school to be fashioned with respect to the elementary program which precedes and the high school program which follows.  The middle school curriculum plan must be a large slice of a total plan developed for schooling from entrance to

exit in a particular community. Variations in grade structure from one
community to another, differing philosophies of education and different
school populations suggest the virtual impossibility of these curricu-
lum slices looking very much alike as one views them from community to
community (Alexander et al., 1968).

Grooms (1967) points out that the content of the curriculum differs
from the traditional elementary and junior high schools. Elementary and
junior high school curricula are constituted of subject matter placed
there for such reasons as difficulty of content, state requirements,
textbook writers, tradition, and opinions of curriculum committees. The
result of these curriculum practices tends to be a fragmented collection
of content with individual parts of the curricula becoming ends in them-
selves. The matter is presented, studied, evaluated, and grades
recorded to indicate student exposure to particular content without
clear-cut objectives being achieved for the total curriculum. The cur-
riculum in the middle school should be designed to accomplish the long-
range objectives of fostering the spirit of inquiry and development of
problem analysis and decision-making capabilities. The particular con-
tent of the curriculum is that content which the students and profes-
sional staff members working with the students determine is needed. The
curriculum frame of reference for middle school is composed of the four
disciplines: social science, science, mathematics, and language arts.
Also included are the concomitant areas such as unified arts, foreign
language, music, and physical education. Within the disciplines, there
is no formal breakdown into courses such as science 6, 7, and 8, or
topics restricted by age of students or number of years in school. Each
discipline is an entity that can be studied from many aspects; for

example, hygiene, physical and natural, in an aspect of science. The

professional staff members organize their disciplines so that students

can identify and work toward the accomplishment of management tasks.

The staff, utilizing its own expertise and availing itself of the find-

ings of the many discipline experts now engaged in determining the

elixir of their specialities, formulates learning programs adaptable to

the learning situation requirements of the individual student (Grooms,

1967).

Eichhorn (1966) proposes that there be two curricula in the middle

school, the analytical and the physical-cultural. In the analytical

curriculum there would be four content divisions; these include lan-

guage, mathematics, social studies, and science. The physical cultural

curriculum also has four content areas; these are fine arts, physical

education, practical arts, and cultural studies. Each curricular struc-

ture is founded on the socio-psychological model; therefore, each has a

relationship to each other (Eichhorn, 1966).

Alexander and Williams (1965) suggest that the curriculum plan for

the middle school should consist of a planned program in three phases:

learning skills, general studies, and personal development. Although

they believe every student should be scheduled into each of the three

phases each year he is in the middle school, they emphasize that the

time requirements and the nature of the work in each phase should be

suited to the individual needs of the student.

### Home Economics in the Middle School Curriculum

The establishment of the middle school as a unique part of the

educational system, designed to meet specific needs of a particular age

group, has presented a new challenge. Thus, one must have course
offerings to help the student in this present stage of development. The
age group which the middle school serves has its own particular charac-
teristics, needs, and accomplishments which need to be met satisfac-
torily before an individual can progress to further development.
Although no two individuals at any given age are alike, there are basic
characteristics which are found to be typical within an age group. It
is these characteristics and developmental tasks that are of paramount
importance in considering a home economics curriculum which will best
serve the age group.

If the middle school serves a transitional and exploratory function
for the pupil, then the home economics program accepts the pupil where
he is, fulfills the needs with which he is faced, and establishes a
desire for continued growth and development in the field of home and
family life; too often there has been a failure in these respects. Too
often, likewise, a senior high school offering was merely transplanted
into a school for early adolescents. Hansen and Hern (1971) say the
question is not, "Should the student take home economics in the middle
school instead of at the senior high level?" but, "How can we offer a
program that will stimulate further interest on the part of the
student?" It is important that one build upon experience--that the
needs of the age group are taken into consideration. Emphasis is placed
on particular phases important to the maturational age of the pupils.
No one suggested course could possibly be recommended for home economics
education in a middle school. Even if one arrived at a perfect combina-
tion within one classroom, schools, communities, and homes differ
throughout the nation so that what would fit the needs of students in

one locality would not be appropriate for another. Variation in beliefs

and practices regarding the scheduling of home economics in middle

schools exists. Some amount, however, is usually required of all girls

at some period in the middle school. Sometimes a short unit is required

in the sixth, seventh, or eighth grades, with an elective or required

program offered in the eighth or ninth grade. Some educators believe

that exploratory experiences should begin at the sixth grade or

earlier, while others feel that the eighth grade is the logical place

to begin due to learning readiness (Hansen and Hern, 1971).

Moss (1969) suggests the home economics curriculum should be health

education oriented and include bodily care, heredity and reproduction,

human behavior, sex education, and alcohol, narcotics, and nutrition

information.

Developing a positive attitude toward occupation training is a

process that can logically begin in the intermediate grades. The pro-

gram of study in the middle school should provide for the utilization of

the tools and materials of today's culture to develop both skill and

attitude on the part of the pre- and early adolescent. Among the con-

cepts recommended by Kindred (1968), for the inclusion in the program of

studies are design, use of tools, elementary instrumentation, properties

of materials, the world of work, and introduction to occupations.

Obviously, inherent in all of these concepts are "learning by doing"

experiences and projects specifically designed to strengthen the concepts

of vocational education. Both boys and girls should be provided with

opportunities in the homemaking arts (Kindred, 1968).

In the middle school, each home economics teacher should be re-

quired to make plans that are compatible with the total program.

Reports vary about emphases. One school, in planning its curriculum,
emphasized that home economics must be relevant to today's world rather
than develop masters of "cocoa cooking", or have as its major objective
the conveyance of middle-class values. Home economics for both boys
and girls is frequently indicated. In the New York City intermediate
schools, the aim of the program is to develop those abilities, knowl-
edges, understanding, and the like that will promote effective living
for urban children. At the fifth and sixth grade levels, such topics as
buying goods, including labeling, and the use of money; preparation and
care of simple foods; personal development including grooming, care of
clothing, making simple garments, and other experiences that would con-
tribute to family living, are listed. At the seventh and eighth grade
levels, emphasis is on buying, social conduct, personal hygiene, simple
home decoration, child care, some basics of home management, use of
leisure time, and the development of other competencies for living in an
urban center. Integration with other special learning centers is to be
encouraged. Home arts might be combined with art, music, theater, and
industrial arts programs. The aesthetics of textile design, for exam-
ple, has many commonalities with painting and sculpture. The teacher
might well point out the unique contributions home economics can make to
the general studies area (Fleck, 1970).

Curriculum guidelines for middle school home economics programs
have been suggested by Weis (1971). These guidelines are intended to
stimulate rather than crystallize thought on middle school home eco-
nomics program development or evaluation. The guidelines are as
follows:

Middle school home economics programs:
1. Feature instruction in which the educative processes

as well as the course content function to satisfy
meaningful objectives.

2. Differentiate learning which is appropriate to group
   instruction from learning which requires the individ-
   ual to perform alone.

3. Insure that each transescent can progress at his own
   rate and to the depth appropriate to his needs and
   abilities.

4. Include objectives appropriate to the physical, social,
   and emotional as well as to the intellectual needs and
   capabilities of transescent learners.

5. Promote understanding of the transescent's growth and
   development as well as the implications of this growth
   for emerging relationships with others.

6. Introduce transescent learners to all areas of home
   economics in ways which stimulate continued independent
   exploration.

7. Emphasize experiences which improve the effectiveness
   of the transescent in functioning and coping within
   his immediate environment.

8. Cultivate and encourage skills in self-directed
   learning.

9. Provide the learner with a basis for organizing and
   expanding his perceptions of individual and family
   life (Weis, 1971, p. 585).

Physical Education in the Middle School

Curriculum

An all-around program in physical education should be offered. The

program should include some activities of social value in larger groups

and heterosexual relationships. All pupils should be encouraged to be-

come proficient in at least one activity and at least average in several

activities. Leadership-followership opportunities should be provided

whenever possible; pupils should be given responsibilities which may

help them to develop qualities desirable in leaders (Bookwalter, 1964).

Hansen and Hearn (1971) specify that an all-around program in phys-

ical education be offered. Physical education is an integral and indis-

pensable phase of education in the middle school. It is concerned with

the growth, development, and adjustment of youth by means of a systematic

program of physical activities and related experiences selected and

organized according to social and hygienic standards which contribute

to the total fitness, growth, and development of the child primarily

through physical activities and directed toward specific outcomes.

Physical education is both a means and an end. It is a means in that it

provides a medium for optimum growth and development of the child. It

is an end in itself because physical fitness and the acquisition of

desirable skills are needed for full living. Physical education aims at

the optimum development of the physically, mentally, and socially

integrated and adjusted individual through guided instruction and par-

ticipation in total-body activities selected according to social and

hygienic standards. The aim of physical education is to provide an

opportunity for the individual to act in situations that are physically

wholesome, mentally stimulating and satisfying, and socially sound

(Hansen and Hearn, 1971).

Physical education is one of the category of experiences through

which the child's needs may be met. An effort should be made to help

each student explore himself and develop an adequate self-concept based

upon knowledge of his own assets and liabilities (Jewett and Knap,

1962).

According to Moss (1971), physical education activities should be

related to the developmental characteristics of middle school students.

Physical fitness, individual sports, and intramural sports should be

provided for both boys and girls. During this period of rapid change,

there is little, if any, justification for interscholastic sports and

the razzle-dazzle associated with such activities (Moss, 1971).

Health Education in the Middle School

Curriculum

A strong health program in addition to the physical education program should be a major feature of the middle school. While the physical education concentrates on physical activity, the health program should assist the student to understand the great changes that are occurring within himself. Nutrition, drug abuse, and sex education are major topics for study and discussion (Moss, 1971).

The middle school is designed for and owes its existence to its ability to meet the common and individual needs of boys and girls in early adolescence. The recognition of its responsibilities in the area of health education is basic to achieving these fundamental goals. Statements of health needs common to all middle school youth have been made by a number of different authorities. Although the statements vary in their manner of presentation, all of them include areas of health information relating to the structure and function of the human body, personal care, nutrition and food, first aid and safety, disease, public or community health and sanitation, alcohol narcotics, and tobacco, rest, exercise, health fads and fallacies or consumer health and mental health including emotional adjustments, family life, and sex education (Hansen and Hern, 1971).

Havinghurst (1948) in his Developmental Tasks and Education lists "accepting one's physique and accepting a masculine or feminine role" as a fundamental developmental task of adolescence. He goes on to say that

> ... since we teach boys and girls to evaluate themselves so
> largely on the basis of their physical development, we must

expect this to be a source of interest, pride, assurance,
doubt, worry, or inferiority feeling depending upon the
accident of the individual's particular physique and
pattern of growth. Many problems of behavior and low
achievement in school can be solved by reassuring boys
and girls that they are 'normal' even if their pattern
of development is not that of the average person
(Havinghurst, 1948, p. 32).

The program for health education of the "middle schooler", accord-
ing to Alexander et al. (1968), may be developed through a special time
allotment and instructional situation, or by a shared plan including
physical education, science, and home economics, or by some other plan
developed for the school by its faculty. Whatever the plan of schedul-
ing and presentation, it is essential that emphasis be given to the
health requirements of the growing body of the "in-between-ager", to the
development and complexities of the human reproduction system, and to
health and safety practices appropriate to this age (Alexander et al.,
1968).

## Characteristics of the Middle School Students

In describing a student between the ages of ten and fourteen, it is
difficult to know whether to call him a child or an adolscent. This is
the in-between, neither-nor stage of life. The middle school student
has characteristics distinguishing him from his childhood and adolescent
compatriots. Grooms (1967, p. 4) describes these characteristics as:

Vigorous, inquisitive individuals on the threshold of
adulthood
Sometimes awkward and uncertain, sometimes facile and
adept, often troubled by self-assessment
Frequently astonished by newly evolving powers
Assiduously requiring proper occasions for exploration
and venture
Now and then capable of adult behavior and responses
Often in need of opportunities for trial and error in
situations where mistakes are admittable.

Before discussing some of the aspects of the early adolescent, it would be expedient to define the term. Jersild (1957) states that the early adolescence refers to that period of time during which the growing individual makes the transition from childhood to adulthood. This period begins and ends at different points for everyone, as there is no precise span of years. Because of this, adolescence is viewed as beginning roughly when children show signs of puberty and continuing until both sexual and physical maturation has been achieved. General agreement--using averages--puts this period between the ages of ten and twenty (Jersild, 1957). According to Kuhlen (1952), some children enter this period in grade five or six while others do not enter it until grade ten--the range, however, is age 9 to 17 for girls and 11 to 19 for boys. Most adolescents experience the majority of their changes between the ages of ten and fourteen--approximately the ages of grades six, seven, and eight.

The adolescent spurt of physical growth is most visible to on-lookers through observations of changes in height and weight. Both height and weight changes are accelerated during two periods of rapid growth, the first during the early years of their life. Girls experience a second period of accelerated growth between the years of nine and twelve. The second period of rapid physical change for boys appears between the ages of eleven and fourteen. For both sexes, this second period of rapid physical growth is followed by a period of diminished velocity until, after a period of years, mature height and weight are achieved. Caution must be used in regard to all averages or central tendencies which refer to growth; for more than any other "average" terms, they seldom refer to a specific growth pattern (Seidman, 1963).

Peer acceptance is a major factor in the life of the middle school student. In everything he thinks and does, the student tries to conform to the norms of his peers. This fact would seem to indicate that a teacher must be cognizant of pupil needs and desires when planning a unit, conducting a lesson, or working individually with his students. Also, when a teacher is attempting to motivate his class, it would seem prudent to concentrate on the class leaders, for the others will often follow. Peer acceptance also indicates the need for an extracurricular program of clubs and activities whose membership is open to all those wishing to join (Hansen and Hern, 1971).

Gesell and Ilg (1956) through their research identified some aspects of personality that are common for the twelve-year-old. Among those identified are:

Variety and instability of interests

Talkative, noisy, daring; a great deal of activity

Seeking peer status with a high regard for peer standards

Desire for identification with the herd

Family status relatively unimportant in influencing peer relations

Informal social activities

Dating present but rare

Emphasis on building relations with peers

Friendships quite temporary

Many friends

Willingness to accept opportunities for social relations

Little insight in behavior

Acceptance of reasonable rules important

Ambivalence in accepting adult authority.

Some people suggest that young people are actually older now than their parents were at the same age because they have developed more rapidly mentally and biologically. Mentally, because in the technological age they live in, they experience increased exposure to the world about them. Biologically, due to a diet richer in vitamins and minerals, girls and boys mature earlier than they did at the turn of the century (Havinghurst, 1968).

## Curriculum Development

Curriculum development is a complex undertaking that involves many kinds of decisions. These decisions need to be made about the general aims which schools are to pursue and about the more specific objectives of instruction. The major areas of subjects of the curriculum must be selected, as well as the specific content to be covered in each. Choices must be made about the type of learning experiences with which to implement both the content understandings and other objectives. Decisions are needed on how to evaluate what students are learning and the effectiveness of the curriculum in attaining the desired ends. Finally, a choice needs to be made regarding what the over-all pattern of the curriculum is to be (Taba, 1962).

Tyler (1950, p. 1) in his syllabus, now in its twenty-ninth printing, stresses the decision-making aspect of curriculum development and identifies four important decisions of the curriculum planner. These are as follows:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?

4.  How can we determine whether these purposes are being
    attained?

All curricula, according to Taba (1962), no matter what their par-

ticular design, are composed of certain elements. A curriculum usually

contains a statement of aims and of specific objectives; it indicates

some selection and organization of content; it either implies or mani-

fests certain patterns of learning and teaching, whether because the

objectives demand them or because the content organization requires

them. Finally, it includes a program of evaluation of the outcomes.

She bases her book Curriculum Development Theory and Practice on the

assumption that there is an order in which decisions are made concerning

the curriculum development task and that pursuing it will result in a

more thoughtfully planned and more dynamically conceived curriculum.

Her suggested order is as follows:

    Step 1:  Diagnosis of needs
    Step 2:  Formulation of objectives
    Step 3:  Selection of content
    Step 4:  Organization of content
    Step 5:  Selection of learning experiences
    Step 6:  Organization of learning experiences
    Step 7:  Determination of what to evaluate and of the
             ways and means of doing it (Taba, 1962, p. 12).

Curriculum is designed so that students may learn. Because the

backgrounds of students vary, it is important to diagnose the gaps,

deficiencies, and variations in these backgrounds (Taba, 1962). Three

sources of gathering information as a basis for selecting objectives are

listed by Tyler (1950); he lists studies of the learners themselves as a

source of educational objectives, studies of contemporary life outside

the school as a second source, and suggestions of subject matter

specialists a third.

Banathy (1968) states that objectives should be specific and that

in an instructional system in the domain of education one will be
required to "formulate specific learning objectives, clearly stating
whatever the learner is expected to be able to do, know, and feel as an
outcome of this learning experience" (p. 22). Mager (1962) defines an
objective as "an intent communicated by a statement describing a pro-
posed change in a learner - a statement of what the learner is to be
like when he has successfully completed a learning experience" (p. 3).

Tyler (1950) explains that to be most helpful in selecting learning
experiences and in guiding teaching, objectives should be specified in
two-dimensional terms of subject matter and content and of expected
behavior.

> By defining these desired educational results as clearly
> as possible, the curriculum-maker has a most useful set
> of criteria for selecting content, for suggesting learning
> activities, for deciding on the kind of teaching procedures
> to follow, in fact to carry on all the further steps of
> curriculum planning (p. 62).

He suggests that the formulation of objectives is the most critical
criterion for guiding all the other activities of the curriculum-maker
(Tyler, 1950).

If it is known from a statement of objectives the particular per-
formance expected of a student, it is then necessary to ask, "What does
the student have to learn so that he can perform in an expected way?"
In other words, Banathy (1968) says the human capabilities - skills,
knowledge, and attitudes - that the individual needs to have in order to
carry out the specified performance must be determined. He suggests
that there are two different tasks to be considered, performance tasks
and learning tasks. Performance tasks, as described in a statement of
objectives, communicate the behavior which the student is expected to
be able to exhibit. Learning tasks and their analysis identify

whatever learning is to be undertaken by the learner to enable him to demonstrate the performance described (Banathy, 1968). According to Tyler (1950, p. 63), the term "learning experience" refers to the "interaction between the learner and the external conditions in the environment to which he can react."

Tyler (1950) explains that the process of evaluation is essentially the process of determining to what extent the educational objectives are actually being realized by the program of curriculum and instruction. Taba (1962, p. 313) defines evaluation as:

> ... a broader undertaking than that of giving tests and grading students. It involves: (1) clarification of objectives to the point of describing which behaviors represent achievement in a particular area; (2) the development and use of a variety of ways for getting evidence on changes in students; (3) appropriate ways of summarizing and interpreting that evidence; and (4) the use of information gained on the progress of students or the lack of it to improve curriculum, teaching and guidance.

The process of evaluation is essentially the process of determining to what extent the educational objectives are actually being realized by the program of curriculum and instruction. Tyler (1950) points out, however, since educational objectives are essentially changes in human beings, that is, the objectives aimed at are to produce certain desirable changes in the behavior patterns of the student, then evaluation is the process of determining the degree to which these changes in behavior are actually taking place. Tyler (p. 106) states:

> This conception of evaluation has two important aspects. In the first place, it implies that evaluation must appraise the behavior of students since it is change in these behaviors which is sought in education. In the second place, it implies that evaluation must involve more than a single appraisal at any one time since, to see whether change has taken place, it is necessary to make an appraisal at an early point and other appraisals at later points to identify changes that may be occurring. On this basis one is not able to evaluate an

instructional program by testing students only at the end
of the program. Without knowing where the students were at
the beginning, it is not possible to tell how far changes
have taken place.... Hence, it is clear that an educational
evaluation involves at least two appraisals - one taking
place in the early part of the educational program and the
other at some later point so that the change may be
measured.

In the evaluation of an instructional program, Kerlinger (1964)
suggests a one group, before-after (pretest-posttest) design. He
explains the procedure dictated by such a design is to measure the group
before any program instruction, by what is called a pretest, and then
again at the end of the program of instruction, by a posttest. The
essential characteristic of this mode of design is that a group is
compared with itself.

## Development of Tests

Ahmann and Glock (1967) define a test as nothing more than a group
of questions or tasks to which a pupil is to respond. The questions and
tasks are known as test items. They are intended to be a representative
sample of questions and tasks related to the trait measured by the test
that are of suitable difficulty. A pupil's responses to the test items
are scored in such a way that, ideally, the results indicate the degree
to which he possesses the specified trait. The principal purpose of a
test is to produce a quantitative representation of the pupil trait that
it is designed to measure (Ahmann and Glock, 1967).

The most common measurement method used in schools today is the
paper-and-pencil achievement test. The steps suggested by Ahmann and
Glock (1967) that a teacher must take when constructing a paper-and-
pencil achievement test are (1) separate from among the specific objec-
tives those that have verbal and mathematical aspects, (2) determine the

relative importance of the verbal and mathematical objectives, and (3) build a group of test items, either of the essay or objective type, that constitute a representative sample of all materials included within the specific objectives.

A convenient way of gathering and organizing the specific objectives is a table of specifications. In its simplest form, the table of specifications is a two-way table, one dimension of which is a breakdown of behavioral changes, and the other of subject-matter topics (Ahmann and Glock, 1967).

The purpose of this procedure for building paper-and-pencil achievement tests is to develop a high quality test, that is, one which will satisfactorily serve the purpose or purposes for which it is intended. The degree to which the achievement test serves this purpose is its content validity.

One type of achievement test is the objective test. Objective tests are tests that can be scored in such a manner that subjective judgment is eliminated when determining the correctness of a pupil's answers. True-false tests, matching tests, and multiple-choice tests are objective tests in the true sense of the definition (Good, 1959).

## Summary

There are common characteristics among the middle schools which seem to be related directly to the special characteristics of pre-adolescence and are also related to the innovative character of today. The middle school is an exciting development and part of the excitement grows out of its newness and flexibility.

One common characteristic of the middle school is an attempt to

combine the best features of the self-contained idea of the elementary school with the best features of the specialization of secondary schools. This may be done in different ways, such as begin with the sixth grade largely self-contained, and a seventh and eighth grade essentially departmentalized. Another characteristic of the middle school is the emphasis on self-understanding. Frequently, this is accomplished by including units in the instructional program of the special concerns of young adolescents. Greater student self-direction and student self-responsibility for learning are also emphasized in the middle school. Nearly all of the new middle schools have some form of independent study plan.

Several innovative features are found in the middle school such as team teaching, nongrading, flexible scheduling, programed instruction, laboratory facilities, and a host of new media. These features are not unique in the middle school, but are common among them; it is difficult to find a middle school that is not utilizing team teaching in some form as well as independent study plans which use special skills development laboratories, and programed instructional materials.

Home economics is found in the middle school curriculum under various titles and in combination with a variety of subjects, with emphasis on the child and his maturity traits. Both boys and girls are included in the home economics offerings in the middle school. Physical education as well as health is concerned with the growth and development of the early adolescent.

The early adolescent, as pointed out by his characteristics, is an individual who has a special kind of need and the middle school is attempting to meet this need.

Curriculum development is a decision making process and involves decisions concerning needs of the students in the middle school, developing objectives and experiences to meet these needs, and discovering if the needs have been met. One method of discovering if the needs have been met is administration of an achievement test.

CHAPTER III

DEVELOPMENT OF CURRICULUM MATERIALS

This chapter describes the procedure and method used to develop the curriculum materials for this study. The curriculum was designed to meet the needs of sixth grade students at Rogers Middle School in the area of health. The subject matter areas of home economics and physical education were interrelated for this particular study.

Organizing for Curriculum Development

In keeping with the purposes of the middle school and with the organization of curriculum at Rogers Middle School, the decision to interrelate selected aspects of home economics and selected aspects of physical education was made by the researcher through a conference with the principal at Rogers. Scheduling, as well as related subject matter content, made this a feasible course combination. The decision to have the content health oriented was influenced by the lack of formal health education at the elementary level in the schools in Oklahoma City. The principal's concern for the pupils' nutrition was the result of his observation of food choices in the cafeteria as well as his expressed belief that many of them usually did not eat breakfast or feel the importance of proper diet. It was his belief that curriculum should expose the students to social and emotional health content as well as physical health.

Through mutual decision of the principal and the researcher, a team was chosen to assist the researcher in the development of the curriculum. The administrative members of the team included the principal who has been at Rogers Middle School since it opened three years ago, and had been with the school system for a number of years as a secondary teacher, a high school assistant principal and a junior high school assistant principal before assuming the principalship at Rogers. The other administrative member was the assistant principal who was a teacher in a junior high and an administrative intern at the central office before assuming the role of assistant principal at Rogers. The teaching team members included the two home economics teachers, one of whom has been at Rogers since it opened, but had not taught previously; the other teacher is in her second year of teaching at Rogers. The other teachers on the team were the boys' physical education teacher, who previously was a junior high coach and has been at Rogers since it opened; and the girls' physical education teacher, who was an elementary teacher and has been at Rogers for the three years it has been in operation. The remaining member of the team was the school nurse who is a registered nurse and has been at the school since it opened.

The organizational meeting was held in early October, 1971. Certain decisions regarding the development and implementation of the curriculum were reached during this meeting. The principal and the assistant principal assisted the team with administrative decisions and the mechanics of implementation of the curriculum. They met with the team when their presence could make a contribution at the administrative level. The school nurse met with the team as her time permitted and when she could make a contribution to the content of the curriculum.

The four teachers met weekly with the researcher to discuss and develop the curriculum. These developmental sessions were taped so a record of the discussions would be available for review or reference. The curriculum was ready for implementation the last nine weeks of the school year 1971-1972 with sixth grade boys and girls presently at Rogers. The four teachers involved in the development were the teachers to implement the program. The researcher, after each meeting, using the discussion from the tapes, put the ideas into a form that could be used by the committee during the next developmental session.

Plan for Designing the Curriculum

The following plan was adopted for use in developing the curriculum (adapted from Taba, 1962 and Banathy, 1968).

```
┌─────────────────┐         ┌─────────────────┐
│        I        │  ────>  │       II        │
│ Diagnose Needs  │         │Formulate Objectives│
└─────────────────┘         └─────────────────┘
        ↑                           │
        │                           ↓
┌─────────────────┐         ┌─────────────────┐
│       VI        │         │      III        │
│ Change to Improve│         │ Develop Evaluation│
└─────────────────┘         └─────────────────┘
        ↑                           │
        │                           ↓
┌─────────────────┐         ┌─────────────────┐
│        V        │  <────  │       IV        │
│  Implement and  │         │ Analyze and Develop│
│  Test Output    │         │ Learning Experiences│
└─────────────────┘         └─────────────────┘
```
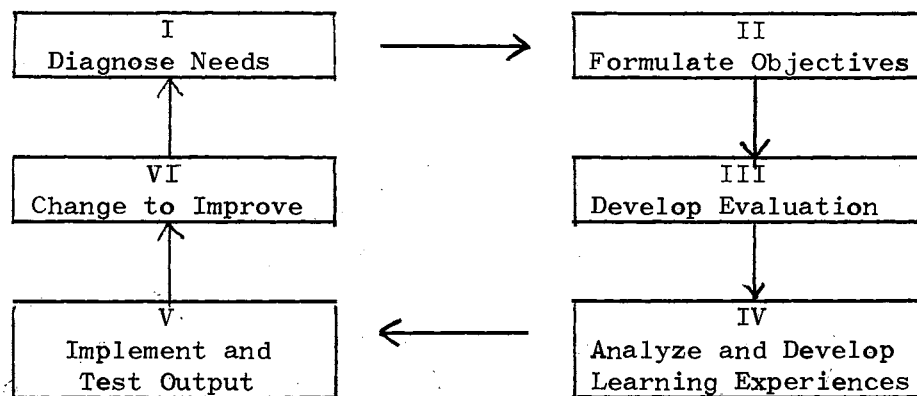
I. Curriculum is designed so that students may learn. Because the backgrounds of students vary, it is important to diagnose the gaps, deficiencies and variations of these backgrounds, and abilities (Taba, 1962).

II. The formulation of objectives is a statement that spells out what the team expects the learner to do, know, feel

as a result of his learning experience (Banathy, 1968).

III. A criteria test based on objectives is developed and used
to test terminal proficiency. Methods of evaluation in-
clude any way of securing valid evidence on attainment of
objectives:  paper-and-pencil tests, records of various
sorts, observations of behavior and of performance as well
as of products of various sorts (Taba, 1962).

IV. The student's previous learnings are identified and
reviewed to determine if he needs to repeat any before
the behavioral objectives can be set for him.  The
learner's capabilities are assessed to ensure that he will
be able to master the tasks set for him.

V. The plan can now be tried out or tested, implemented, and
installed.  The performance of the learner, who is the
product of the plan, is to be evaluated in order to assess
the degree to which he behaves in the way initially
described (Banathy, 1968).

VI. Findings of the evaluation are then fed back into the plan
to see what changes - if any - are needed to improve the
plan.

Diagnosis of Needs

Several methods of assessing the needs of the students were used:
(1) self-esteem inventory, (2) interest inventory, (3) findings of a
study by Gessell and Ilg (1956), and (4) teacher ideas.

1. The self-esteem inventory (Appendix A) was developed by the
Department of Research and Statistics of Oklahoma City Public Schools.

The inventory is constructed on the basic items used by Coopersmith

(1959) and the Rogers and Dymond (1954) scale. Some items were

reworded, by the statisticians in the Department of Research and Sta-

tistics of Oklahoma City Public Schools, to be used with children from

nine to fifteen years of age and lie skill items were added to determine

the reliability of the student's answers. Norms established during the

school year 1970-71 by the Department of Research and Statistics,

Oklahoma City Public Schools will be used for this study.

This adaptation of the inventory was developed to be used with stu-

dents in Learning Centers in the Oklahoma City Public Schools and is now

being used for the second year. It is administered by the teacher as a

pretest when the student enters the Learning Center, is scored, and the

information used by the teacher to guide her in working with the stu-

dent. The inventory is administered again as a posttest when the stu-

dent has completed his assigned time in the Learning Center to determine

if any changes in self-esteem have taken place during his time in the

Learning Center.

The objective of the inventory is to ascertain the student's

perception of himself in three areas; peers, school, and self, and is

constructed to indicate the emotional, social, and mental health of the

student in these three areas. Examples of information the researcher

will look for are: attitude toward oneself as a growing organism,

ability to relate to and get along with peers, acceptance of appropriate

masculine or feminine social role, and the degree of student's personal

independence. These are examples of information that will help assess

the needs of the students and give a basis for curriculum development.

There are 48 items in the self-esteem inventory. The students

responded to each question by checking one of two responses, these
responses being "like me" and "unlike me". If the student felt that an
item indicated how he usually felt he checked the blank space under the
column "like me". If the item did not indicate how he usually felt he
checked the blank space under column "unlike me". The inventory is
constructed so that there are 24 items related to emotional health,
eight items related to social health, eight items related to mental
health indicating mostly attitude toward school and school work, and
eight items are of a lie skill nature (Appendix A).

Scores for students having a lie skill score of four or below were
considered invalid according to norms established during the school year
1970-71 by the Department of Research and Statistics at Oklahoma City
Public Schools. Analysis of the scores as reported in Table I indi-
cated 50 students had valid scores and could be compared with the
established norms.

The results of the self-esteem inventory showed that 54 per cent
of the students were below the norm (19.36) in emotional health, 52 per
cent were below the norm (6.12) in social health, and 82 per cent below
the norm (6.12) in mental health. The norms were established by the
Department of Research and Statistics at Oklahoma City Public Schools
based upon the average score a large representative group of ten to
fourteen-year-olds in the Oklahoma City Public Schools during the school
year 1970-71.

From analysis of the results of the self-esteem inventory, the team
felt that more than one-half of the students showed evidence of having a
self-image below normal in the areas of peer relations and self-concept

TABLE I

SCORES OF STUDENTS ON THE SELF-ESTEEM INVENTORY
(N-82)

| Student No. | Emotional Score Norm 18.36* | Social Score Norm 6.12* | Mental Score Norm 6.12* | Total Score | Lie Score |
|---|---|---|---|---|---|
| 1. | 17 | 5 | 2 | 24 | 6 |
| 2. | 17 | 2 | 4 | 23 | 3 |
| 3. | 12 | 2 | 6 | 20 | 5 |
| 4. | 14 | 5 | 5 | 24 | 7 |
| 5. | 16 | 5 | 6 | 27 | 4 |
| 6. | 21 | 5 | 4 | 30 | 3 |
| 7. | 21 | 6 | 8 | 35 | 4 |
| 8. | 17 | 6 | 5 | 28 | 4 |
| 9. | 18 | 6 | 5 | 29 | 2 |
| 10. | 18 | 7 | 7 | 32 | 5 |
| 11. | 19 | 7 | 7 | 33 | 6 |
| 12. | 18 | 6 | 4 | 28 | 6 |
| 13. | 15 | 3 | 3 | 21 | 5 |
| 14. | 16 | 5 | 6 | 26 | 4 |
| 15. | 16 | 2 | 4 | 22 | 3 |
| 16. | 21 | 5 | 3 | 29 | 8 |
| 17. | 11 | 5 | 0 | 16 | 8 |
| 18. | 20 | 8 | 6 | 34 | 5 |
| 19. | 20 | 6 | 3 | 29 | 3 |
| 20. | 29 | 8 | 4 | 32 | 6 |
| 21. | 12 | 6 | 6 | 24 | 5 |
| 22. | 19 | 8 | 4 | 31 | 6 |
| 23. | 12 | 4 | 1 | 17 | 3 |
| 24. | 13 | 5 | 4 | 20 | 6 |
| 25. | 17 | 8 | 1 | 26 | 6 |
| 26. | 19 | 8 | 7 | 34 | 6 |
| 27. | 19 | 3 | 3 | 25 | 7 |
| 28. | 18 | 5 | 5 | 28 | 4 |
| 29. | 21 | 7 | 6 | 34 | 6 |
| 30. | 21 | 7 | 6 | 34 | 3 |
| 31. | 19 | 7 | 4 | 03 | 6 |
| 32. | 20 | 7 | 3 | 30 | 7 |
| 33. | 22 | 6 | 5 | 33 | 2 |
| 34. | 23 | 8 | 6 | 37 | 3 |
| 35. | 11 | 1 | 5 | 17 | 7 |
| 36. | 12 | 4 | 5 | 21 | 5 |
| 37. | 16 | 6 | 3 | 25 | 4 |
| 38. | 14 | 5 | 4 | 23 | 8 |
| 39. | 14 | 6 | 4 | 24 | 7 |
| 40. | 20 | 7 | 5 | 32 | 6 |
| 41. | 17 | 5 | 6 | 28 | 2 |
| 42. | 17 | 7 | 4 | 28 | 2 |

TABLE I (CONTINUED)

| Student No. | Emotional Score Norm 18.36* | Social Score Norm 6.12* | Mental Score Norm 6.12* | Total | Lie Score |
|---|---|---|---|---|---|
| 43. | 18 | 6 | 2 | 26 | 4 |
| 44. | 20 | 5 | 1 | 26 | 7 |
| 45. | 17 | 2 | 4 | 23 | 3 |
| 46. | 11 | 5 | 0 | 21 | 8 |
| 47. | 19 | 8 | 7 | 34 | 6 |
| 48. | 19 | 7 | 8 | 34 | 7 |
| 49. | 20 | 6 | 7 | 32 | 5 |
| 50. | 19 | 8 | 5 | 32 | 6 |
| 51. | 20 | 7 | 4 | 31 | 7 |
| 52. | 18 | 6 | 5 | 29 | 1 |
| 53. | 18 | 6 | 5 | 29 | 8 |
| 54. | 21 | 8 | 7 | 36 | 6 |
| 55. | 16 | 7 | 7 | 30 | 4 |
| 56. | 17 | 4 | 5 | 26 | 6 |
| 57. | 15 | 4 | 2 | 21 | 4 |
| 58. | 12 | 4 | 0 | 26 | 5 |
| 59. | 12 | 5 | 5 | 22 | 5 |
| 60. | 15 | 5 | 1 | 21 | 4 |
| 61. | 26 | 5 | 4 | 35 | 2 |
| 62. | 19 | 6 | 4 | 29 | 2 |
| 63. | 20 | 7 | 7 | 34 | 7 |
| 64. | 20 | 7 | 4 | 31 | 7 |
| 65. | 19 | 7 | 1 | 27 | 7 |
| 66. | 12 | 2 | 4 | 18 | 8 |
| 67. | 19 | 7 | 7 | 33 | 7 |
| 68. | 26 | 6 | 7 | 36 | 4 |
| 69. | 19 | 4 | 4 | 27 | 2 |
| 70. | 15 | 7 | 5 | 27 | 5 |
| 71. | 20 | 7 | 8 | 35 | 5 |
| 72. | 20 | 6 | 5 | 31 | 1 |
| 73. | 18 | 5 | 5 | 28 | 7 |
| 74. | 18 | 7 | 4 | 29 | 7 |
| 75. | 19 | 7 | 6 | 32 | 4 |
| 76. | 17 | 4 | 4 | 24 | 3 |
| 77. | 16 | 6 | 4 | 26 | 4 |
| 78. | 13 | 5 | 6 | 24 | 5 |
| 79. | 10 | 3 | 4 | 17 | 4 |
| 80. | 14 | 5 | 1 | 20 | 6 |
| 81. | 13 | 6 | 3 | 32 | 3 |
| 82. | 17 | 5 | 6 | 28 | 5 |

*Norms were established by the Department of Research and Statistics at Oklahoma City Public Schools during the school year 1970-1971.

and indicated a need for study related to social and emotional health. The team was reminded that in analyzing these results on mental health, the inventory statements indicating mental health were related mostly toward attitude about school and school work. With this in mind, they determined that they should try to help improve the attitudes of the students.

2. The interest inventory contained twenty-three items. These were questions that the teachers thought the students would like to discuss and have answers to. In order to develop the inventory, they drew upon their years of experience in working with sixth graders at Rogers, and three in-service education workshops they all have attended concerning the preadolescent. The students were asked to check the items they would like to discuss or have more information about (Appendix B). Time was allowed for the students to list other questions they would be interested in having answered.

The team considered a definite interest was indicated by the students if seventy-five per cent or more of the students checked the question. Table II lists the per cent of students indicating an interest in each item.

In addition to the ones on the interest inventory, the questions the students listed that they would be interested in having answered were:

(1) How can I control my manners?

(2) What is the basic diet for me, at twelve years old?

(3) What are some ways I can lose weight?

(4) Why don't twins always grow the same?

(5) How can I change my looks?

TABLE II

INTEREST INVENTORY PER CENT OF STUDENTS
INDICATING INTEREST
(N-82)

| Question | Per Cent of Students |
|---|---|
| 1. What makes me grow the way I do? | 85.00 |
| 2. What foods do I need to grow? | 89.00 |
| 3. What do foods have to do with my endurance in activities? | 73.00 |
| 4. Why is breakfast such an important meal in the day? | 84.00 |
| 5. What kinds of exercise will make me better in sports? | 51.00 |
| 6. How much sleep and rest should I get? | 72.00 |
| 7. What makes a girl or boy popular with the group? | 89.00 |
| 8. What do foods, sleep, and exercise have to do with my looks? | 82.00 |
| 9. Why should we have definite rules by which we live? | 50.00 |
| 10. Why do we have a thing like "good manners"? | 45.00 |
| 11. What makes a "good sport"? | 36.00 |
| 12. What is a habit; how is it formed? | 87.00 |
| 13. How does my physical health affect my school work? | 89.00 |
| 14. Why do some people get upset easily? | 85.00 |
| 15. What should I do when I am angry? | 84.00 |
| 16. When I am upset, how can I keep from speaking or acting without thinking? | 86.00 |
| 17. What is wrong with "hating" certain people? | 24.00 |
| 18. How can a person keep from being afraid of things like tests and teachers? | 79.00 |
| 19. How can I learn to be at ease or comfortable with other people? | 85.00 |
| 20. What is wrong with making excuses when I get in trouble? | 36.00 |
| 21. What are some ways I can improve my self-control? | 89.00 |
| 22. Why is honesty the best policy at all times? | 45.00 |
| 23. Why don't I grow in height and weight the same as all friends? | 77.00 |

(6)  Why can't I do better work in school?

(7)  How can I get along with my family?

(8)  Why do people fight?

(9)  Why am I a different size than my friends?

(10)  Why do we have to eat certain foods?

(11)  Why are some people nervous?

(12)  What makes me talk so much?

(13)  I would like to learn more about my personal health;

how can I always stay healthy?

(14)  Why don't people take baths?

(15)  Why don't I like myself?

(16)  How can I look better?

(17)  How can I get along with my older sister?

(18)  Why don't my parents try to understand me?

(19)  Why am I always tired?

3.  Gesell and Ilg (1956) in reporting a research study, in their book Youth The Years From Ten to Sixteen, identified various physical maturity traits of ten, eleven, and twelve-year-olds.  The team used these as guides to physical health needs of the students.  Their findings are summarized in the following paragraphs.

Physical Development - The ten-year-old delights in physical activities; his stamina is at a high level but he also enjoys less strenuous exercise.  Girls show the first signs of approaching adolescence, are more sex aware than boys, but are apt to be embarrassed about receiving sex information.  The rate of boys' growth is slower, and sex information is taken casually.  In general, the ten-year-old is content with himself but may have sharp, brief bursts of anger.

At eleven, girls' physical maturity begins to make rapid changes. The average girl has achieved about ninety per cent of her adult stature, and some of the girls have started to menstruate. Only a very few boys show outward signs of sexual maturity; some may have an increase in bone size and others will have an accumulation of fat tissue over the hips and chest. Many are not willing to ask questions about sex from their parents or other adults.

At the age of twelve, girls' physical maturity continues to develop and most girls have started menstruation. Boys have begun to show definite traces, of one kind or another, of beginning puberty.

Grooming - The ten-year-old shows only slight interest in his personal appearance, alternating from being extremely messy to being moderately clean. He needs to be reminded, or may have to be forced, to take a bath. As far as the ten-year-old is concerned, hair, teeth, and nails take care of themselves. A choice of clothes comes within the interest of most, but they may wear the same ones for several days.

At eleven the boy or girl does not resist bathing, but wants to do it only when he can find the time. This is the age when the dawning awareness of a new social self seems to be centered in both the hair and the teeth. Occasionally, an eleven-year-old might feel guilty if he has not brushed his teeth. The new awareness may extend to the fingernails but not sufficiently to clean and groom them. The eleven-year-old shows a greater interest in clothes, but not in caring for them, only in choosing them.

At the age of twelve, the improvement in grooming which began at eleven continues. The idea that he may need to take a bath enters his thoughts, especially when he can see the dirt on himself, although

showers are preferred as they are quicker. Even though he may bathe more often, certain areas will be missed, such as the ears. Fewer reminders are needed for brushing teeth and washing hands, but the nails still present a problem. Girls have started experimenting with makeup, mostly lipstick. The fit of clothes becomes important to the twelve-year-old and there is some improvement in the care of clothing, especially those that are the favorites.

Posture - The ten-year-old may have poor posture while sitting and a few even slump while standing. The attitude is one of irriation if they are corrected.

The eleven-year-old has not changed much in attitude where posture is concerned, but if physical development has not progressed as much as their peers they may slump more to cover up the lack of development.

At the age of twelve posture may improve slightly as awareness of personal appearance becomes important.

Rest - For ten-year-olds the average bedtime will range from seven to nine-thirty. Bedtime may be different on school nights and weekends. Girls average nine and one-half hours of sleep a night while boys average ten and one-half hours.

The eleven-year-old's bedtime will range from seven-thirty to ten. Some are allowed to stay up and watch TV more than the ten year old. The average eleven-year-old sleeps nine and one-half hours and getting up is very difficult for some.

For the twelve-year-old, the average bedtime is a little after nine. Bedtime is still largely determined by parents; the twelve-year-old will go to bed because he has to do so, not because he thinks he needs the sleep. The average child still sleeps about nine and one-half

hours and is very sluggish about getting up.

Diet and Nutrition - The ten-year-old likes more foods than he dislikes. His favorites include steak, roast beef, hamburger, hot dogs, raw vegetables, ice cream, and cake. Most eat between meals. Diet may be lacking in cooked vegetables and many will begin to skip breakfast or eat very little.

Most eleven-year-olds love to eat and will eat almost anything but in a few cases appetite has fallen off and they are "finicky" or "picky". They dislike most cooked vegetables and will refuse to eat them as well as all kinds of fish, and mixed things like casseroles when they do not know what is in them. Breakfast holds little importance if they are in a hurry.

The twelve-year-old boy has a "tremendous" appetite. Girls may begin to try a diet to lose weight, but do not take it seriously. Cooked vegetables that are not the most common will not even be tried. Breakfast is often skipped.

4. Teacher ideas - In addition to the other three sources of needs assessments, the teachers drew upon ideas they had developed in a recent in-service conducted in their school concerning the preadolescent, and upon their years of teaching experience. Based upon these, a discussion with the researcher resulted in the conclusion that the following needs were important: the students need to be recognized as individuals and given a feeling of self worth; the students need to have a feeling of achievement and success; the students need to understand the importance of body cleanliness in relationship to physical activity - to shower after physical exercises; the student needs to understand that he is an individual and does not develop at the same rate as his peers but

at his own unique rate.

After reviewing the needs assessments of the students, the team

arrived at the following definition of health which they felt necessary

and important to the curriculum they were developing. "Health is a qual-

ity of life involving dynamic interaction and interdependence among the

individual's physical well-being, his mental and emotional reactions,

and the social complex in which he exists."

A schematic was developed using the student as the central theme.

The schematic is illustrated in Figure 1.
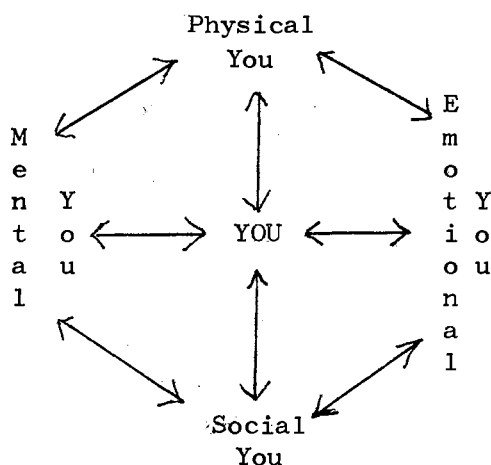


Figure 1. Schematic of Health
Components

The topics to be included in the curriculum were tentatively out-

lined after reviewing the needs assessments. The team made the decision

to exclude sex education from the curriculum, even though the physical

maturity traits of ten, eleven, and twelve-year-olds as reported by

Gesell and Ilg (1956) pointed out the awareness of, and a beginning
interest in sex. This was done because through the general studies
core there is a science unit on sex education. The topics tentatively
were outlined as follows:

I. Physical Health

    A. Nutrition

    B. Body growth

    C. Exercise and activity

    D. Grooming

II. Emotional Health

    A. Emotional feelings

    B. Emotional needs

    C. Personality

III. Social Health

    A. Social maturity

    B. Manners

IV. Mental Health

    A. What mental health is

    B. How mental health relates to physical health

    C. How mental health relates to emotional health

    D. How mental health relates to social health.

## Formulating Objectives

> An objective is an intent communicated by a statement
> describing a proposed change in a learner - a statement of
> what the learner is to be like when he has successfully
> completed a learning experience. It is a description of a
> pattern of behavior (performance) we want the learner to
> be able to demonstrate (Mager, 1962, p. 3).

Popham and Baker (1970) explain that almost every educator concedes the

importance of objectives, but until recently few have advocated that
they be described in explicit terms of how the learner is supposed to
behave at the conclusion of instruction.  In order to provide guidance
it is necessary for the classroom teacher to describe his objective in
terms of measurable learner behaviors - that is, in terms of what the
learner can do or how he will act at the conclusion of instruction.

The team developed tentative behavioral objectives, using informa-
tion obtained through the needs assessments, for each of the areas
outlined.  Concepts were stated and the sub-concepts developed for each
topic.  Team members expressed the need for a basic statement of an
objective for each sub-concept.  They did not wish to state these in
measurable terms but used them as goals or aims.  An example of the
first development follows:

Concept:  Physical health involves the body and its needs.

Sub-concept:  Nutrition - Food is made up of different nutrients.

Objective:  Develop an awareness of the nutritional needs of the
body.

Behavioral Objectives:

1.  The student will demonstrate his understanding that
foods are composed of nutrients by identifying major
nutrients in given foods.

2.  The student will be able to identify ways in which
major nutrients are used by the body.

3.  The student will demonstrate the principle that foods
are grouped according to their nutrient content by
classifying foods into the proper group when given
their major nutrient content.

4.  The student will demonstrate his ability to use the

    four food groups as a guide by planning a balanced

    selection of foods for one day.

5.  The student will be able to demonstrate his awareness

    of advertising techniques by preparing one factual

    and one misleading sales presentation for a given

    food item.

6.  The student will be able to list some of the illnesses

    that result from the lack of the essential nutrients.

As guides for the development of behavioral objectives, the team
used Blooms' (1956) domains of behavior. These were the cognitive,
affective, and psychomotor domains. The cognative domain includes all
behaviors dealing with the recall or recognition of knowledge and the
development of intellectual abilities and skills. Within the affective
domain are all behaviors that describe changes in interest, attitudes,
and values, and the development of appreciation and adequate adjustment.
The psychomotor domain lists all behaviors that are primarily concerned
with the performance of a physical activity.

After the development of the objectives, they were revised, rear-
ranged, and placed in a hierarchical arrangement. According to Banathy
(1968) within the domain of a subject matter, behaviors that represent a
response learning should be pursued before experiences of a chain or
multiple-discrimination type.

The arrangement of the behavioral objectives and their correlation
with the needs assessments are shown in Table III.

TABLE III

CORRELATION OF BEHAVIORAL OBJECTIVES
AND NEEDS ASSESSMENTS

| Behavioral Objective | Needs Assessment |
|---|---|

### Physical health - Nutrition

1. The student will be able to demonstrate his understanding that foods are classified into four groups by identifying foods in each group.
2. The student will be able to demonstrate his understanding of nutritional needs for hismelf by analyzing his food intake for a day.
3. The student will demonstrate his ability to use the four food groups as a guide by planning a balanced selection of foods for one day.
4. The student will demonstrate his understanding that foods are composed of nutrients by identifying major nutrients (protein, fat, and carbohydrate) in given foods.
5. The student will be able to identify ways in which major nutrients are used in the body.
6. The student will demonstrate the principle that foods are grouped according to their nutrient content by classifying foods into the appropriate group when given their major nutrient content.
7. The student will be able to demonstrate his awareness of advertising techniques by preparing a sales presentation for a given food item. This can be in the form of a drawing, commercial, song, etc.

*Gesell and Ilg* - physical maturity traits- Diet and Nutrition

*Interest inventory* - teacher *developed*
4. Why is breakfast such an important meal in the day? (84%)*

*Student input* -
What is a basic diet for me, at twelve-years-old?
What are some ways to lose weight?
Why do we have to eat certain foods?
Why am I always tired?

### Physical health - Body Growth

8. The student will become aware of and start his physical growth record by figuring his present growth rate.
9. The student will be able to discuss how the body works by answering the following questions: 1. Which part of the body controls everything you think, feel, and do? 2. What gland

*Gesell and Ilg* - physical maturity traits - Physical Development

*Interest inventory* - teacher *developed*
2. What foods do I need to grow? (89%)*

TABLE III (CONTINUED)

| Behavioral Objective | Needs Assessment |
|---|---|
| has much to do with your growth? 3. Why must the food you eat be digested? | 8. What do foods, sleep and exercise have to do with my looks? (82%)* |
| 10. The student will demonstrate his understanding of digestion by identifying where carbohydrates begin to change and where proteins and fats are digested. | Student input Why don't twins always grow the same? Why am I a different size from my friends? I would like to learn more |
| 11. The student will be able to identify some of the main bones in the skeleton, be able to discuss how strong bones are built and what the skeleton does for the body. | about my personal health and how I can always stay healthy. |
| | Teacher identified needs The student needs to understand that he is an individual and does not develop at the same rate as his peers but at his own unique rate. |

### Physical health - Exercise and Activity

| | |
|---|---|
| 12. The student will be able to demonstrate his understanding of physical fitness by explaining the importance of exercise. | Gesell and Ilg - physical maturity traits - Rest |
| 13. The student will become aware of his physical fitness by participating in a physical fitness test. | Interest inventory - teacher developed 8. What do sleep and exercise have to do with my |
| 14. The student will be able to demonstrate exercises that will help make or keep him physically fit. | looks? (82%)* 13. How does my physical health affect my school work? (89%)* |

### Physical health - Grooming

| | |
|---|---|
| 15. The student will be able to rate his own grooming standards. | Gesell and Ilg - physical maturity traits - Grooming and Posture |
| 16. The student will be able to set up standards for grooming in relation to body cleanliness, care of the complexion, care of the hair and care of the hands and feet. | Interest inventory - teacher developed 12. What is a habit and how is it formed? (87%)* |
| 17. The student will become aware of the present care of his teeth by participating in a cleanliness test at home. | |

TABLE III (CONTINUED)

| Behavioral Objective | Needs Assessment |
| --- | --- |
| 18. The student with the help of the instructor will be able to analyze his own posture and determine ways of improving his posture. | Student input - How can I change my looks? Why don't people take baths? How can I look better? Teacher identified needs - The students need to understand the importance of body cleanliness in relationship to physical activity - to shower after physical exercise. |

Emotional - Feelings and Needs

| | |
| --- | --- |
| 19. The student will be able to list some of the emotional feelings of people and participate in a class discussion on ways to manage these feelings. | Interest inventory - teacher developed |
| | 14. Why do some people get upset easily? (85%)* |
| | 15. What should I do when I am angry? (84%)* |
| 20. The student will be able to identify some of his own emotional feelings. | 16. When I am upset, how can I keep from speaking or acting without thinking? (86%)* |
| 21. The student will be able to identify some basic emotional needs. | 18. How can a person keep from being afraid of things like tests and teachers? (79%)* |
| | Student input - Why are some people nervous? How can I get along with my family? How can I get along with my older sister? Why don't my parents try to understand me? |
| | Teacher identified needs - The students need to be recognized as individuals and given a feeling of self-worth. The students need to have a feeling of achievement and success. |

TABLE III (CONTINUED)

| Behavioral Objective | Needs Assessment |
|---|---|

### Emotional - Personality

22. The student will be able to ana-
lyze his personality by rating his
personality on rating sheet.

23. The student will be able to demon-
strate his understanding that
physical characteristics and person-
ality identify him.

24. The student will be able to recognize
some ways of improving his personality.

**Interest inventory - teacher developed**
7. What makes a girl or boy
popular with the group?
(89%)*
19. How can I learn to be
at ease or comfortable with
other people? (85%)*
21. What are some ways I
can improve my self-
control? (89%)*

**Student input -**
What makes me talk so much?
Why don't I like myself?

**Self-esteem inventory -**
More than half of the stu-
dents showed evidence of
having a self-image below
normal in the areas of
self-concept.

### Social health - Social Maturity

25. The student will be able to demon-
strate an understanding of his
social maturity by participating in
a social maturity rating.

**Interest inventory - teacher developed**
7. What makes a girl or boy
popular with the group?
(89%)*
19. How can I learn to be
at ease or comfortable with
other people? (85%)*

### Social health - Good Manners

26. The students will be able to define
etiquette and good manners.

27. The students will be able to list
some of the do's and don'ts of good
manners at home, school, and in
public.

**Student input**
How can I control my manners?

**Self-esteem inventory-**
More than half of the stu-
dents showed evidence of
having a self-image below
normal in the area of peer
relations.

### Mental health

28. The student will be able to demon-
strate his understanding of mental
health by describing a mentally
healthy person.

**Student input -**
Why can't I do better school
work?

**Self-esteem inventory**
The statements indicating
mental health were related
mostly toward attitude
about school and school
work.

*Percent of students indicating an interest in the question as
indicated by Interest Inventory administered to the students.

Develop Evaluation

In the development of evaluation, the team used as guidelines some principles, stated by Hansen and Hern (1971), which are basic to a sound program of evaluation.  The following principles guided the team:

(1)  Evaluation should be based upon stated objectives.

(2)  Evaluation should involve all who are concerned with the program being evaluated.

(3)  Self-evaluation should be supplemented by evaluation which utilizes outside assistance.

(4)  Evaluation should be comprehensive; it should concern itself with all aspects of a given program.

(5)  Evaluation should utilize a variety of instruments, techniques, and data.

(6)  Evaluation should be continuous.

(7)  Evaluation should identify both immediate and long-range goals.

(8)  Evaluation should be constructive.

The evaluation developed took several forms; paper-and-pencil responses, observations, student personal involvement (verbal and non-verbal) and formal test items (Appendix C).

A pre- and posttest was developed by the team (Appendix D).  The test consisted of ten multiple-choice items and ten true-false items. The multiple-choice test item is one in which a direct question or incomplete statement is presented and a number of responses are given. The pupil is to choose the correct answer to the question or expression for completing the statement.  This type of objective test is widely used  on informal achievement tests because it is so adaptable.  It can

be used to measure recall of information or application of a principle

in a situation in practically any subject-matter area (Ahmann and

Glock, 1967). The true-false item in its simplest form is a declarative

statement that the pupil must judge as true or false  A test containing

this type can sample widely a large amount of subject matter without

requiring much testing time (Ahmann and Glock, 1967).

The items of the test were based on various behavioral objectives

identified by the team. A convenient way of gathering and organizing the

specific objectives is a table of specifications.

A two-way table of specifications was constructed by the team

(Table IV). At the upper part is found the behavioral changes and at

the left side is the subject matter. Behavioral changes included are

facts, comprehension, and application. The subject matter content is

physical health, including nutrition, body growth, and grooming;

emotional health; social health; and mental health. The weights

expressed as percentage are given for each of the subject matter items

under specified behavioral changes. The behavioral changes and subject

matter are those indicated in the behavioral objectives in the curricu-

lum (Appendix C).

A table of specifications was constructed by the team to show the

behavioral objective to be tested and the test item (Table V).

To determine the reliability of the developed test, it was adminis-

tered to the students, prior to the implementation of the curriculum, on

two consecutive days. Gronlund (1965) states that the procedure for

this test-retest method is to give the same test twice to the same group

with any time interval between tests from several minutes to several

years. Popham (1967) says that when one tests the mean difference

TABLE IV

TABLE OF SPECIFICATIONS FOR CURRICULUM

| Subject Matter | Per Cent of Behavioral Change | | | |
| --- | --- | --- | --- | --- |
| | A<br>Facts | B<br>Compre-<br>hension | C<br>Appli-<br>cation | Total |
| I. Physical Health | | | | |
|     Nutrition | 6 | 14 | 14 | 34 |
|     Body Growth | 20 | 0 | 14 | 34 |
|     Grooming | 0 | 0 | 3 | 3 |
| II. Emotional Health | 0 | 7 | 0 | 7 |
| III. Social Health | 0 | 7 | 6 | 13 |
| IV. Mental Health | 0 | 3 | 6 | 9 |
| Total | 26 | 31 | 43 | 100 |

TABLE V

TABLE OF SPECIFICATIONS FOR THE TEST

| Behavioral Objective | Test Item |
|---|---|
| 1. The student will be able to demonstrate his understanding that foods are classified into four food groups by identifying foods in each group. | Multiple-choice<br>1. The bread and cereal food group includes which one of the following foods?<br>  1. sugar    3. milk<br>  2. rice     4. eggs<br>2. The milk food group includes which one of the following foods?<br>  1. butter    3. eggs<br>  2. oranges  4. ice cream<br><br>True-false<br>_____1. Foods are divided into the four food groups by their color. |
| 4. The student will demonstrate understanding that foods are composed of nutrients by identifying major nutrients (protein, fat, and carbohydrate) in given food. | Multiple-choice<br>3. In which one of the following foods is protein the main nutrient?<br>  1. butter    3. apples<br>  2. eggs     4. biscuits |
| 5. The student will be able to identify ways in which major nutrients are used in the body. | Multiple-choice<br>4. The nutrient which builds and repairs the body is?<br>  1. carbohydrate 3. protein<br>  2. fat       4. Vitamin C |
| 9. The student will be able to discuss how the body works by answering the following questions:<br>1. What part of the body controls everyhing you think and feel and do?<br>2. What gland has much to do with your growth?<br>3. Why must the food you eat be digested? | Multiple-choice<br>5. Which part of the body controls everything you think, feel, and do?<br>  1. heart    3. brain<br>  2. liver    4. stomach<br>6. Which gland has much to do with your growth?<br>  1. gall bladder 3. liver<br>  2. pituitary  4. stomach<br><br>True-false<br>_____7. Once food is digested, it is carried by the blood stream to various cells in the body that need it. |

TABLE V (CONTINUED)

| Behavioral Objective | Test Item |
|---|---|
| 11. The student will be able to identify some of the main bones in the skeleton, be able to discuss how strong bones are built, and what the skeleton does for the body. | True-false<br>____2. There are 58 bones in the human skeleton<br>____3. Strong bones require a great deal of calcium and phosphorus. |
| 16. The student will be able to set up standards for grooming in relation to body cleanliness, care of the complexion, care of the hair, and care of the hands and feet. | True-false<br>____4. Body cleanliness is a part of good grooming. |
| 21. The student will be able to identify some basic emotional needs. | Multiple-choice<br>9. Which one of the following is a basic emotional need of people?<br>  1. the need to cry a lot<br>  2. the need to like and be liked<br>  3. the need to get mad at people and have people mad at you<br>  4. the need to be afraid of more things |
| 26. The students will be able to define etiquette and good manners. | Multiple-choice<br>10. How can you develop good manners?<br>  1. Good manners come naturally<br>  2. Good manners must be practiced<br>  3. You are born with good manners<br>  4. Good manners cannot be developed |
| 27. The students will be able to list some of the do's and don'ts of good manners at home, school, and in public. | True-false<br>____5. Good manners are a sign of consideration<br>____6. It does not matter what strangers think of your behavior. |
| 28. The student will be able to demonstrate his understanding of mental health by describing a mentally health person. | True-false<br>____8. Mental health has to do with the ways people think, feel, and act.<br>____9. Mental health is more important for people who are old than people who are young.<br>____10. It is usually not necessary for a mentally healthy person to seek help or guidance from others. |

between two sets of scores for the same subjects, there is likely to be a positive correlation between the two sets of scores. To determine if a positive correlation existed, the Pearson Product-Moment correlation coefficient was figured. The raw score correlation formula used for the computation was found on page 89 of Popham and is presented below:

$$r = \frac{\Sigma XY - \frac{(\Sigma X)(\Sigma Y)}{n}}{\sqrt{(\Sigma X^2 - \frac{(\Sigma X)^2}{n})(\Sigma Y^2 - \frac{(\Sigma Y)^2}{n})}}$$

X = individuals score on test 1

Y = same individuals score on test 2

n = number of pairs of scores.

A coefficient, or r value, may range from 1.00 to -1.00, with a perfect positive correlation reflected by an r of 1.00, a perfect negative correlation reflected by an r of -1.00, and a zero value for r indicates no correlation. Since r = .7302, there is an indication of a positive correlation for the test and the test has a test-retest reliability.

## Format for the Curriculum

It was at this point in the development of the curriculum that the team decided they needed a format for the curriculum. Through a consensus of the team, the following format was adopted for this particular curriculum (Appendix C):

Concept:

Sub-concept:

Objective:

| Behavioral Objective and Evaluation | Suggested Learning Experiences | Resources and Materials |
| --- | --- | --- |
|  |  |  |

## Analyze and Develop Learning Experiences

Once the specific performance expected of the learner (behavioral objective) has been identified, what he has to learn in order to be able to perform successfully must be determined. The capabilities - skills, knowledge, and attitudes - that he needs to have in order to carry out the specific output performance, must be determined (Banathy, 1968).

For each behavioral objective, the team formulated one or more learning experiences (Appendix C). The researcher guided the formulation of these experiences by asking the team the following questions pertaining to each objective: What has to be done to enable the learner to achieve the objective? What exactly will be done? When and where will they do it? What materials are needed for the experience? Who will see to the performance?

Resources and materials, necessary to carrying out the experience, were determined by the development team for each of the learning experiences. Materials and resources were reviewed and used to assist in the formulation of the learning experiences and for references (Appendix E).

An appendix to the curriculum was added by the team to be used as resource and teaching materials by the teacher while implementing the curriculum (for examples of material, see Appendix F).

Students' materials were compiled and developed by the team to be put in notebook form and reproduced for student use. The readability of these materials was checked using the Frye Readability Test; all materials were of a sixth grade or below readability (for examples of material, see Appendix G).

Curriculum Evaluation Before Implementation

The developed curriculum was reviewed by a committee from the Oklahoma City Public Schools, consisting of the Curriculum Director, the Physical Education Consultant, and the Home Economics Consultant. Two minor changes suggested for the learning experiences were referred to the development team and they agreed the changes should be made. One change was a sequence of behavioral objectives and the other was to add an alternate learning experience.

The researcher had selected six curriculum specialists outside the Oklahoma City Schools to review and evaluate the curriculum. Two of these specialists were with the Department of Health, Physical Education, and Recreation at the university level and were recommended to the researcher as having the capabilities and background to carry out the evaluation. One of the specialists in the area of home economics at the university level had developed a curriculum guide for Consumer-Homemaking in the Middle School. Another university home economics specialist had authored an article for the Journal of Home Economics concerning a criterion and the need for the development of materials at

the middle school level. The planning for and participation in a workshop for middle school home economics teachers led to the selection of the fifth university curriculum specialist and the sixth was chosen because of her work with in-service education and workshops for the development of middle school materials. These specialists had been contacted by letter (Appendix H) and asked to indicate on an enclosed post card their willingness to schedule the review of the curriculum. All six specialists agreed to participate in the evaluation.

A letter of explanation accompanied the curriculum to the university specialists (Appendix H). All copies of the curriculum were returned immediately, allowing time to add suggestions before implementation of the curriculum.

Some of the suggestions made which the development team agreed should be added to the curriculum were:

(1) An opportunity for role play of the emotional feelings of fear, love, anger, etc.

(2) The addition of another learning experience for mental health. The learning experience which the team added was, "Have a panel discussion - the nurse discuss how mental health is affected by physical health, one school counselor discuss how mental health is affected by emotional health, and another school counselor discuss how mental health is affected by social health. Time for questions should be allowed following the discussion."

(3) A revision of the physical fitness test. The revision would eliminate the softball throw, use bent leg sit-ups instead of straight leg sit ups, and increase the walk-run

test from six to eight minutes.  The check sheet for
students' materials was revised (for revised check sheet,
see Appendix I).

## Summary

The curriculum was developed by a team of teachers and administra-
tors from Rogers Middle School.  The curriculum was health oriented and
interrelated the selected aspects of home economics and selected
aspects of physical education.  The curriculum was developed using a
planned approach for designing curriculum.  The steps described in this
chapter include diagnosis of needs, formulation of objectives, develop-
ment of evaluation, and analysis and development of learning experiences.
At this point in the plan the curriculum was submitted to a group of
specialists for evaluation.

The fifth part of the plan, Implement and Test Output, will be
discussed in Chapter IV.  The final part of the plan, Change to Improve,
will be discussed in Chapter V.

CHAPTER IV


IMPLEMENTATION OF THE CURRICULUM

AND ANALYSIS OF DATA


This chapter is concerned with the implementation of the curriculum
and the testing of the output which is the fifth part of the plan for
designing the curriculum.  The findings of the pretest and posttest are
analyzed and discussed.  Behavioral objectives are presented with a dis-
cussion of the learning experiences and evaluation for each objective.

Implementation of the Curriculum


The curriculum was implemented the last nine weeks of the school
year 1971-1972 at Rogers Middle School through the home economics area
interrelated with the physical education area.

Teachers


The four teachers who served on the development team were the four
teachers to implement the curriculum.  The two home economics teachers
spent the major share of the time with the students as they had been
assigned to this particular group of students for the nine week period.
Although the physical education teachers had the students only one-
fourth of the time they were aware of the total curriculum and able to
evaluate it and make suggestions for changes.  The teachers met with the
researcher weekly to discuss time scheduling and any anticipated changes.

## Students

There were 82 students in the study, 36 boys and 46 girls. The students ranged in age from eleven to thirteen, with 44 eleven-year-olds, 36 twelve-year-olds, and two thirteen-year-olds. The grade points of the group for the previous semester ranged from 4.00 to 1.75 with the average being 2.25. The students had not participated in a health course in the elementary grades nor had they participated in a test for brushing the teeth. All of the students had spent nine weeks in physical education at Rogers during the first semester. Most of their time was spent in gymnastics. None of the students had been enrolled in home economics at Rogers or in the elementary grades.

The self-esteem inventory as well as the interest inventory had been administered to these students by the counseling staff at Rogers the first semester of the school year 1971-1972.

## Time Allotment

The students attended forty-two class periods made up of two modules of 28 minutes each for a total of 56 minutes per day. The curriculum called for thirty of the class periods to be spent in the home economics rooms with the two home economics teachers and ten class periods in the gym with the physical education teachers. The students were scheduled into two classes, 36 in one and 44 in the other. The first group met in the morning at nine-thirty and the second group met immediately after lunch at twelve-twenty.

## Teacher's Log

Each teacher was asked to keep a "teacher's log" (Appendix J). The

log listed the behavioral objective by number, provided space to list the learning experience or experiences used, and if the teachers believed the experience met the behavioral objective. They were asked to note any experiences added or omitted, list resources used, and to tell whether the evaluation used gave evidence that the objective had or had not been met. Space was provided for teachers' subjective comments. The results will be explained in detail later in the chapter as each objective is discussed.

## Evaluation

A test (Appendix D) was administered to the students as a pretest, by the teachers, before the curriculum was implemented. The same test was administered to the students as a posttest, by the teachers, at the conclusion of the implementation. Table VI lists the test results from the pre- and posttest for each student. A comparison of the pre- and posttest scores showed all students to have scored higher on the posttest than they did on the pretest; the gain in scores ranged from 3 to 54.

## Statistical Analysis

According to Popham (1967) a special t model which is designed for correlated data should be used whenever a relationship between data in the two groups of scores exists. Such correlation between data in the groups is usually present in situations involving matched pairs or when two measures have been taken for the same person, as in pre- and posttest mean comparisons.

TABLE VI

PRE- AND POSTTEST SCORES FOR EACH STUDENT
(N - 82)

| Student No. | Pretest Score | Posttest Score | Score Gain |
|---|---|---|---|
| 1. | 52 | 93 | 41 |
| 2. | 69 | 100 | 31 |
| 3. | 50 | 100 | 50 |
| 4. | 66 | 100 | 44 |
| 5. | 66 | 93 | 27 |
| 6. | 69 | 100 | 31 |
| 7. | 76 | 93 | 17 |
| 8. | 70 | 100 | 30 |
| 9. | 46 | 93 | 47 |
| 10. | 72 | 100 | 28 |
| 11. | 65 | 93 | 28 |
| 12. | 62 | 100 | 38 |
| 13. | 73 | 75 | 2 |
| 14. | 55 | 79 | 24 |
| 15. | 59 | 83 | 24 |
| 16. | 62 | 76 | 14 |
| 17. | 46 | 72 | 26 |
| 18. | 49 | 86 | 37 |
| 19. | 26 | 69 | 43 |
| 20. | 52 | 86 | 34 |
| 21. | 45 | 90 | 45 |
| 22. | 63 | 97 | 34 |
| 23. | 46 | 90 | 44 |
| 24. | 66 | 100 | 34 |
| 25. | 69 | 100 | 31 |
| 26. | 62 | 100 | 38 |
| 27. | 60 | 100 | 40 |
| 28. | 66 | 100 | 34 |
| 29. | 45 | 93 | 48 |
| 30. | 35 | 89 | 54 |
| 31. | 76 | 93 | 17 |
| 32. | 40 | 90 | 50 |
| 33. | 69 | 100 | 31 |
| 34. | 72 | 93 | 21 |
| 35. | 66 | 83 | 17 |
| 36. | 39 | 76 | 37 |
| 37. | 45 | 80 | 35 |
| 38. | 69 | 86 | 17 |
| 39. | 56 | 86 | 30 |
| 40. | 69 | 86 | 17 |
| 41. | 29 | 58 | 29 |
| 42. | 49 | 80 | 31 |
| 43. | 47 | 93 | 46 |

TABLE VI (Continued)

| Student No. | Pretest Score | Posttest Score | Score Gain |
|---|---|---|---|
| 44. | 53 | 93 | 40 |
| 45. | 59 | 100 | 41 |
| 46. | 72 | 90 | 18 |
| 47. | 74 | 100 | 26 |
| 48. | 66 | 100 | 34 |
| 49. | 63 | 100 | 37 |
| 50. | 59 | 93 | 34 |
| 51. | 49 | 100 | 51 |
| 52. | 65 | 93 | 28 |
| 53. | 50 | 93 | 43 |
| 54. | 63 | 90 | 27 |
| 55. | 65 | 93 | 28 |
| 56. | 66 | 69 | 3 |
| 57. | 56 | 86 | 30 |
| 58. | 49 | 86 | 37 |
| 59. | 56 | 86 | 30 |
| 60. | 65 | 72 | 7 |
| 61. | 55 | 65 | 10 |
| 62. | 39 | 86 | 47 |
| 63. | 65 | 79 | 14 |
| 64. | 83 | 100 | 17 |
| 65. | 59 | 100 | 41 |
| 66. | 65 | 90 | 25 |
| 67. | 72 | 100 | 28 |
| 68. | 69 | 93 | 24 |
| 69. | 49 | 100 | 51 |
| 70. | 79 | 93 | 14 |
| 71. | 52 | 100 | 48 |
| 72. | 62 | 93 | 31 |
| 73. | 40 | 93 | 53 |
| 74. | 72 | 93 | 21 |
| 75. | 59 | 100 | 41 |
| 76. | 62 | 86 | 24 |
| 77. | 29 | 58 | 29 |
| 78. | 45 | 86 | 41 |
| 79. | 56 | 69 | 13 |
| 80. | 52 | 80 | 28 |
| 81. | 35 | 42 | 7 |
| 82. | 42 | 79 | 37 |

The following t test for mean difference from Popham (1967, p. 130) was employed for this research.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\dfrac{s_1^2}{n_1} + \dfrac{s_2^2}{n_2}}}$$

$\bar{x}_1$ = mean of the posttest

$\bar{x}_2$ = mean of the pretest

$s_1^2$ = variance of posttest group

$s_2^2$ = variance of pretest group

$n_1$ = number of subjects in posttest

$n_2$ = number of subjects in pretest

Scores on the pretest ranged from 26 to 83 with a mean score of 88.43. Scores on the posttest ranged from 42 to 100 with a mean score of 57.71. The degrees of freedom equaled 161. Table D (Guilford, 1956, p. 581) presented the t values necessary for significance at the .01 level of confidence to be 2.609; so it can be said that there was a significant difference in the scores of the pre- and posttest since t = 16.2789. It can be assumed that part of the difference was due to the curriculum.

## Analysis of Objectives

As an introduction to the unit the teachers drew the schematic, which they had developed (Figure 1, p. 54), on the board and explained to the students that the YOU referred to each of them and that the group would be studying the physical health, including nutrition, body growth, exercise and activity, and grooming, of YOU - the emotional health of YOU - the social heath of YOU - and the mental health of YOU. The

teacher also explained that it takes all four of the healths to make the YOU each student would like to be. The first part that the group would be studying would be the physical health of YOU.

Both groups of students were given the same experiences as nearly as possible; in many instances the teachers helped each other with the classes. When it was not necessary to assist, they would observe and help in the evaluation.

Each behavioral objective will be discussed next and comments from the teachers' logs will be incorporated along with evaluation of each objective.

Concept:     Physical health involves the body and its needs.

Sub concept:   Food is made up of different nutrients needed for growth and health.

Objective:    Develop an awareness of the nutritional needs of the body.

## Behavioral Objective Number One

The student will be able to demonstrate his understanding that foods are classified into four groups by identifying foods in each group.

The suggested learning experiences (Appendix C) were used and a class discussion followed with the students being able to answer oral questions asked by the teacher. The posttest included three test items (Multiple-choice 1, 2, and true-false 1) related to behavioral objective one; 93 per cent of the students answered multiple-choice test item number one correctly, 99 percent answered multiple-choice test item number two correctly, and 95 per cent answered true-false item one correctly.

## Behavioral Objective Number Two

The student will be able to demonstrate his understanding of nu-
tritional needs for himself by analyzing his food intake for a day.

The learning experiences (Appendix C) were used and one teacher
reported, "Just a beginning!  The students could record what they ate
and most of them could group the foods into the most appropriate food
group.  They had difficulty deciding if their diet was nutritionally
balanced.  Many students omit breakfast."

The following learning experience was added for both groups:
Write some of the students' food records on the board, analyze and dis-
cuss them with the students.  Have students change the menu to make it
nutritionally balanced.  To evaluate this experience the students were
given four menus and asked to identify the ones which were balanced
according to the "Daily Food Guide" and correct the others to make them
nutritionally balanced.  Seventy per cent of the students were able to
complete the evaluation to the satisfaction of the teacher.

## Behavioral Objective Number Three

The student will demonstrate his ability to use the four food
groups as a guide by planning a balanced selection of foods for
ond day.

The learning experience (Appendix C) was used utilizing six sets of
food models.  The researcher observed this activity and became aware of
the lack of interest on the part of some students to plan breakfast.
Many students indicated they do not eat breakfast because it is not
prepared for them, they do not get up in time to fix their own, or they

do not know how to "cook". Several students included an abundance of food for the day, much more than they could eat.

At the climax of this activity the researcher met with the development team and the following <u>learning experience was added</u> to help meet the needs of students who did not eat breakfast: Place a number of grocery items on a worktable, divide students into groups of five, and assign the task of choosing and preparing two food items that could be on a breakfast menu. Grocery items included bread, peanut butter, graham crackers, icing, cinnamon, butter, sugar, cocoa-mix, cheese, Tang, milk, cereal, jam, and bananas.

Some of the food items the students prepared included: cinnamon toast, open face cheese sandwiches, graham cracker and peanut butter cookies, graham cracker and icing cookies, peanut butter mixed with bananas made into sandwiches, chocolate milk, milk with Tang in it, and Tang drink. The students had a "taste breakfast" where they shared what they had prepared with the rest of the class. Each group then told how they had prepared the food and how long it had taken them.

## Behavioral Objective Number Four

The student will demonstrate his understanding that foods are composed of nutrients by identifying major nutrients (protein, fat, and carbohydrate) in given foods.

The learning experiences listed (Appendix C) were used. The students performed the experiments, first as demonstrations for the class and then each student chose one he wished to do. The teachers <u>added the experience</u> of having the students fill out a chart on which they listed the food tested, the nutrient for which they tested it and if the food

did or did not contain the nutrient. The charts were used as an evaluation measure by the teachers. They felt the objective had been met by most of the students. Test item (Appendix D, Multiple-choice 3) three on the posttest pertaining to this objective was answered correctly by 79 per cent of the students. Additional comments by the teachers were, "The students thoroughly enjoyed these experiments", and "The students learned much from these experiments; one student remarked that he had wondered how you knew that meat was protein."

## Behavioral Objective Number Five

The student will be able to identify ways in which major nutrients are used in the body.

The learning experience (Appendix C) was used and much discussion on the part of the teachers was necessary before they felt that the students were beginning to understand.

A learning experience was added. The film "Food Energy and You" was used to help explain the way the body uses food to give it energy. The students appeared to have a better understanding after the film was shown and discussed. Test item (Appendix D, Multiple-choice 4) number four on the posttest pertained to objective number five; 76 per cent of the students answered it correctly.

## Behavioral Objective Number Six

The student will demonstrate the principle that foods are grouped according to their nutrient content by classifying foods into the proper group when given their major nutrient content.

The film suggested in the learning experience (Appendix C) was shown to the students and a brief discussion followed. The teachers reviewed the transparencies that had been presented in behavioral objective number five. The students were able to place most of the foods in their proper food group and identify the major nutrient. They had difficulty with desserts and casseroles and the teacher often had to identify ingredients in these dishes for the students; for example, when given macaroni and cheese, the students were able to see that it would belong to two food groups.

## Behavioral Objective Number Seven

The student will be able to demonstrate his awareness of advertising techniques by preparing a sales presentation for a given food item. This can be in the form of a drawing, commercial, song, etc.

This objective was omitted entirely. Three of the specialists who reviewed the curriculum questioned the appropriateness of the objective. One stated she did not feel it was germane to the concept and general objective. The development team, on first review, had decided to retain the objective, but since more time was spent on objective three than had been anticipated it was decided to omit this objective.

Sub concept: Body growth is influenced by a variety of factors.

Objective: Develop an awareness of how the body functions.

## Behavioral Objective Number Eight

The student will become aware of and start his physical growth record by figuring his present growth rate.

The school nurse did the weighing and measuring as described in
the learning experience (Appendix C) while the teachers assisted each
student individually to figure his growth rate.  The students had many
questions and the nurse gave a short explanation why people were of
different sizes even though they were the same age; this was an added
learning experience.  The teachers reported the student interest was
high and they welcomed the opportunity to ask the nurse questions.

Behavioral Objective Number Nine

The student will be able to discuss how the body works by
answering the following questions:  1.  Which part of the body
controls everything you think and feel and do?  2.  What gland
has much to do with your growth?  3.  Why must the food you eat
be digested?

An "invisible" plastic man was used for this learning experience
(Appendix C) using a tape with the suggested script (Appendix F).  After
the tape was played the plastic man was taken apart and each organ ex-
amined and discussed.  One of the students asked where the appendix was
located and what it did.  When his question couldn't be answered by the
teacher, he volunteered to look it up during his independent study time
and report back to the class.  Three test items (Appendix D, Multiple-
choice 5, 6, and true-false 7) pertaining to this objective were on the
posttest; 96 per cent of the students answered item five correctly, 84
per cent answered item number six, and all students answered item seven
of the true-false part of the test correctly.  The teachers commented
that the students requested to have an opportunity to investigate the
plastic man and hear the tape during their independent study time.  The

decision was made by the team to place the tape and plastic man in the media center when it was not being used in the classroom. The student interest was high during this experience.

## Behavioral Objective Number Ten

The student will demonstrate his understanding of digestion by identifying where carbohydrates begin to change and where proteins and fats are digested.

The learning experiences (Appendix C) were used. The students were especially interested in the experiment showing what happened to milk in the stomach. The plastic man was taken apart again and the organs that have to do with digestion were discussed in conjunction with the transparencies.

A *learning* *experience* *was* *added* showing the reason the body breaks starches into sugar before digestion. Cornstarch was mixed with water and did not dissolve; then sugar was mixed with water and dissolved. The teacher then related the same principle to the body.

During the discussion the students were able to answer most of the questions the teacher asked. Test items (Appendix D, Multiple-choice 7, 8) seven and eight related to this objective; 76 per cent of the students answered item seven correctly and 84 per cent were able to answer item eight correctly.

## Behavioral Objective Number Eleven

The student will be able to identify some of the main bones in the skeleton, be able to discuss how strong bones are built and what the skeleton does for the body.

The learning experiences (Appendix C) were followed, using the skeleton in the invisible man to discuss the main bones. One student in the morning class had had bone surgery on the breast bone. He brought his x-rays, showed them to the class and explained how the doctors told him they had repaired the bone. He said the x-rays were given to him because so many had been taken the doctors didn't need them all. He answered questions about how bones are x-rayed. He came into the afternoon class and shared his experience with them. This was an added experience.

The film and transparencies were shown and discussed. The students identified the bones on the study sheet and answered the question sheets (Appendix G). Most of the students accomplished these assignments to the satisfaction of the teachers. Two test items (Appendix D, True-false 2 and 3) pertained to objective number eleven; 99 per cent of the students answered item number two correctly and all students answered item number three correctly.

Sub concept: Daily exercise and activity helps keep you physically fit.

Objective: Develop an awareness of the relationship between physical activity and physical health.

## Behavioral Objective Number Twelve

The student will be able to demonstrate his understanding of physical fitness by explaining the importance of exercise.

The students read the material suggested in the learning experience (Appendix C) and answered the questions (Appendix G) assigned by the teacher. Both written questions and oral questions were used. The

majority of the students answered the written questions correctly and took part in answering questions orally. Three students in the afternoon class had difficulty with reading; they were allowed to go to the media center and listen to a tape which the teachers had made prior to this assignment. They answered the questions as a group on tape to be heard later by the teacher, then returned to class and took part in the oral discussion. All students took part in answering questions orally.

## Behavioral Objective Number Thirteen

The student will become aware of his physical fitness by

participating in a physical fitness test.

For this learning experience (Appendix C) the students were in the school gym. All students participated in the fitness test and filled in the record sheet (Appendix I). Each student was timed individually and no attempt was made to do a comparison but students themselves were very interested in who got the best time, etc. All four teachers were with the students during the test. After the tests were completed the students, as an added learning experience, were shown exercises and the "aerobic" concept of a fitness program was demonstrated and explained (Cooper, 1968).

## Behavioral Objective Number Fourteen

The student will be able to demonstrate exercises that will

help make or keep him physically fit.

The students participated in practicing exercises. The physical education teachers demonstrated one exercise and then the students would try it under the observation of the teachers before introduction of the

next exercise (Appendix C). There was a question and answer period after the exercise session. The students seemed to enjoy the session and many indicated an interest in continuing the exercises on their own.

> Sub concept: The development of good grooming habits promotes total physical health.

> Objective: Develop an awareness of the importance of good grooming.

## Behavioral Objective Number Fifteen

The student will be able to evaluate his own grooming standards.

The students were asked to read the "Good Grooming Chart" (Appendix G) before they filled it in and to ask any questions they might have about the meaning of any of the statements. There were some questions, concerning statements about the hair as well as on the color and style of clothes. The students filled in the chart and decided in what category they belonged.

## Behavioral Objective Number Sixteen

> The student will be able to set up standards for grooming in relation to body cleanliness, care of the complexion, care of the hair, and care of the hands and feet.

The learning experience (Appendix C) was used. After the discussion as an added learning experience, each student made a chart of "Good Grooming Chores". Daily, weekly, and less often chores were listed on the chart. The charts were handed in. After the teachers had checked the charts they were handed back and discussed. The class as a whole came up with all of the important grooming chores. Test item (Appendix

D, True-false 4) pertains to this objective; 99 per cent of the students answered the item correctly. One of the home economics teachers suggested that if the physical education instructors would continually stress the importance of good grooming in relation to showers and clean gym uniforms more students may see the relationship of grooming and physical activity.

## Behavioral Objective Number Seventeen

The student will become aware of the present care of his teeth by participating in a cleanliness test at home.

The school nurse explained the importance of taking proper care of the teeth and demonstrated, using a large tooth brush and model of teeth, the proper way to brush the teeth (Learning Experience, Appendix C). Each student was provided with a kit for brushing his teeth and testing for cleanliness. The learning experience was changed and the students performed the test in the classroom. Mirrors were provided and each student was provided with a paper cup for water. The students took turns going to the sink areas for the test, the nurse and teachers helped the students with the second brushing to insure the proper method. After the tests the students wrapped the brushes in foil, replaced them in the individual boxes and were allowed to take the brushes and remaining tooth paste home. The students showed extreme interest in this project and wanted to know where they could buy the red tablets for testing to see if brushing has been properly done. All students had little or none of the residue left on the teeth after the second brushing.

Behavioral Objective Number Eighteen

The student with the help of the instructor will be able to
analyze ways of improving his posture.

The learning experiences (Appendix C) were used. The physical edu-
cation teachers conducted the posture analysis on each student. After
the analysis the students were grouped according to posture difficulties
and corrective exercises were demonstrated and explained to each group
by the physical education teachers.

After the students read the assigned "Points on Posture", they took
turns demonstrating proper ways of standing correctly, walking correctly,
and sitting correctly. The physical education teachers and the home
economics teachers assisted the students as they demonstrated. The
film "Posture and the Keyboard" order was cancelled by the Media Center
so the teachers substituted a group of posters which had been secured
from the National Dairy Council for the discussion. Evaluation was in
the form of teacher observation of student participation.

Summary

These first eighteen objectives were designed to help meet the
needs of the students in the area of physical health, which included
nutrition, body growth, exercise and activity, and grooming, as assessed
through the diagnosis of needs. During an evaluation meeting of the
team, the following suggestions for improvement were made: involve out-
side people, such as a dietitian during the nutrition unit, a high
school star athlete during the exercise and activity unit, a dental
technician during the grooming unit, and a physician during the body
growth unit. Interrelate with the science department when studying

nutrition, and expand the unit on exercise and activity to include
leisure time activities.

Before presenting objectives nineteen the teachers reviewed the
schematic (Figure 1, p. 54) with the students and showed them that they
had just finished studying physical health and now they were going to
investigate the emotional health that went into their make-up as
individuals.

Concept:     Emotionally healthy people feel right about them-

selves and others.

Sub concept:    Emotional health is reflected by a person's feelings.

Objective:    Develop an awareness of different emotional feelings

and needs.

Behavioral Objective Number Nineteen

The student will be able to list some of the emotional feelings
of people and participate in class discussion on ways to manage
feelings.

The learning experiences (Appendix C) were used and after the dis-
cussion using the overhead transparencies, as an added experience, the
students suggested situations that made a person show his emotional
feelings. These suggestions were listed on the board and the students
chose a situation to role play. After each presentation the class sug-
gested ways that the person could have controlled his emotions; some
other emotional feelings were also suggested. The students appeared to
be enthusiastic during the role play activity and some showed mature
judgment in their suggestions.

Behavioral Objective Number Twenty

The student will be able to identify some of his own emotional feelings.

The learning experience of playing the volley ball game (Appendix C) was carried out. The physical education teachers were in charge of the game while the home economics teachers saw that the game was on video-tape. In one of the classes it appeared that most of the group became very upset with one particular boy and it was impossible for the teacher to hold any kind of a discussion; so she had the students write their statements first and then the next day when the students had calmed down they had an excellent discussion. The researcher was present during this discussion and observed the students identifying why they became angry; some admitted they were taking their anger out on someone else when they were really upset with themselves. The boy explained how hurt he had been and that what had happened he didn't feel was his fault. After the discussion the video-tape was viewed and most of the students were able to laugh at themselves and admit it was everyone's fault and not just one person's.

The other class wrote their statements and then conducted their discussion from these statements. The teacher stated that the students appeared to be very truthful in their responses and they seemed to enjoy discussing their emotions. She suggested that it would be better if both the physical education teachers and the home economics teachers could team on this discussion with the students.

Behavioral Objective Number Twenty-One

The student will be able to identify some basic emotional needs.

The overhead transparency was used (Appendix F) as suggested in the learning experience (Appendix C). Some of the additions made by the students were: You need to understand others and be understood by them. You need to be listened to. You need to know what is expected of you. You need to have your way some of the time. You need to have friends. Test item (Appendix D, Multiple-choice 9) number nine on the posttest pertained to this objective; 95 per cent of the students answered the question correctly.

<u>Sub concept</u>: Personality is the sum total of all the things that go into making a person a unique individual.

<u>Objective</u>: Develop an understanding of what personality means.

## Behavioral Objective Number Twenty-Two

The student will be able to analyze his personality by rating his personality on a rating sheet.

Before the students started the learning experience (Appendix C) the teacher <u>added the experience</u> of asking the students to help her define personality. Some suggestions which the students made were: Personality is what you are, it is your attitude, it is how you act, or it is how you treat others.

After the students rated themselves on the Personality Rating sheets (Appendix G) some of the items were used for class discussion. Examples of questions presented by the students were: What do posture and grooming have to do with personality? What if some of my answers are true some of the time and not always?

A great deal of interest was expressed by most of the students in their own personalities. As an <u>added experience</u> the teachers asked them

to describe in writing someone they thought had a good personality, without using the name of the person. Several students read their descriptions to the class and the teacher listed the main points on the board that the students used to describe the person. This activity appeared to help the students understand the meaning of personality.

## Behavioral Objective Number Twenty-Three

The student will be able to demonstrate his understanding that physical characteristics and personality identify him.

The learning experience (Appendix C) to construct a collage was used after the students did the assigned reading. As an added experience the teachers wrote the following poem on the board and had one of the students read it to the class to help guide their thinking in selecting pictures for their collage.

### Special

Nobody's eyes are quite the same as your eyes.
Some eyes are brown and some are big and blue.
But your eyes are special just because they're
      your eyes.
And you are special just because you're you.

Nobody's voice sounds quite the same as your voice;
Singing or laughing or calling out a name.
Your voice is special just because it's your voice.
No other voice sounds quite the same.

You're somebody special, there's nobody like you.
You won't find another if you travel far and wide.
You've your own special feelings, your own special
      secrets.
Your own special happiness deep inside.

And nobody's smile shines quite the same as your
      smile.
Nobody can smile just the way you do.
Your smile is special just because it's your smile.
And you are special just because you're you.

You're the one and the only, extraordinary,
very special you.

Anonymous

The students were provided with a variety of magazines, a piece of

cardboard 18 inches by 12 inches, scissors, glue and strips of adhesive

backed bright colored paper.  The students spent two days seeking out

pictures - some brought pictures from home - and arranging them on the

cardboard.  The colored strips of paper were used to outline their

collages, and some students cut letters out and wrote their names or

"Who Am I" across the collage.  When the collages were finished the stu-

dents took turns explaining theirs to the class.  One of the teachers

commented, "They did enjoy this activity, and it did help them think

about themselves."

After their explanations the teachers showed the students how to

attach yarn to the collages so they can be hung on the wall for their

rooms at home.  One of the teachers attached them to her bulletin boards

until the students came by to pick them up after school.

Behavioral Objective Number Twenty-Four

The student will be able to recognize some ways of improving his

personality.

Before the learning experience (Appendix C) was used, as an added

experience the teachers conducted a discussion on the characteristics of

a person with a good personality.  While the students listed the char-

acteristics the teacher wrote them on the board.  After this activity

the students did the learning experience and wrote their statements.

One of the teachers commented, "The statements showed that most

of the students were really thinking of their weak points and what they

needed to do to improve their personalities." The other teacher, after

reading the students' statements for evaluation stated, "You know I am

surprised; most of the students really gave some thought to their state-

ments. These are good!"

## Summary

Objectives number nineteen through number twenty-four were designed

to help meet the needs of the students in the area of emotional health

as assessed through the diagnosis of needs. Both teachers expressed the

desire to have the counselors as a part of the teaching team during

this part of the implementation; if possible, they suggested that they

be a part of the development team.

While the students were making their collages, both teachers con-

structed a bulletin board in their rooms. The schematic (Figure 1, p.

54) was on the bulletin board with a picture of a boy and a girl in the

center with the word YOU under the picture. Around the outside of the

schematic were pictures of young people involved in various activities,

for example, with "physical you" were pictures of young people playing

games, eating, and sleeping. The teachers referred to these bulletin

boards and explained to the students that they were ready to begin con-

sidering the "social you" part of the YOU.

Concept:      Social health is reflected by a person's actions

              toward others.

Sub concept:  Social maturity is satisfying personal needs and

              wants in a socially acceptable way.

Objective:    Develop student awareness of social maturity.

Behavioral Objective Number Twenty-Five

The student will be able to demonstrate an understanding of his

social maturity by participating in a social maturity rating.

The learning experience (Appendix C) was used and the students

filled out the "Social Maturity" sheets (Appendix H). After the stu-

dents finished checking the rating sheets each item was used for dis-

cussion and the students as a group decided what the correct answer was.

Each student checked his own paper and then turned it in. The reading

was assigned after which the film, "Acting With Maturity", was shown and

discussed. The film was an added learning experience that the teachers

felt might strengthen the objective. The papers were then handed back

to the students and they were asked if they thought any of their deci-

sions should be changed. The teachers reported the students' participa-

tion in the discussions and decisions. The students showed a great deal

of interest in the discussions, and decided that two of the answers

should be changed.

Sub concept:  Good manners are simply a sincere and kindly con-

sideration of others.

Objective:   Develop an awareness that a person is judged by

his good manners.

Behavioral Objective Number Twenty-Six

The students will be able to define etiquette and good manners.

After the assigned reading (Learning Experience, Appendix C) the

students were divided into small groups and given five minutes to con-

duct a buzz session "Why are good manners important?" One person from

each group reported back to the class what their buzz group decided.

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As an added experience the teachers presented a series of transparencies which showed some good manner situations and asked the question, "What would you do?" The students participated in giving a solution to the situation.

Test item (Appendix D, Multiple-choice 10) number ten pertained to objective number twenty-six; 97 per cent of the students answered it correctly. Evaluation of the students' participation in the buzz sessions as well as their solutions to the transparency situations was made by the teachers.

## Behavioral Objective Number Twenty-Seven

The student will be able to list some of the do's and don'ts of good manners at home, in school, and in public.

The learning experience (Appendix C) was followed and the students presented their lists on transparencies to the class. One teacher remarked, "These kids listed more things than even I can think of. They have at least written them down, maybe they will practice them; awareness helps." One true-false item (Appendix D, true-false 7) related to this objective; 98 per cent answered test item number seven correctly.

## Summary

Objectives number twenty-five through number twenty-seven were designed to help meet the needs of the students in the area of social health as assessed through the diagnosis of needs. The teaching team felt that this unit was weak and needed expanding, but weren't just sure how it should be done.

The schematic on the bulletin board was again brought to the

attention of the students. The teachers pointed out that the last

health that went into make YOU was mental health.

Concept: Mental health affects physical, emotional, and
social health.

Objective: Develop an awareness of the relationship of mental
health with physical, emotional, and social health.

## Behavioral Objective Number Twenty-Eight

The student will be able to demonstrate his understanding of

mental health by describing a mentally healthy person.

The learning experiences (Appendix C) listed were used with the

added experience of a panel discussion, including the school nurse and

two counselors. The students asked the panel several questions. Some

examples of the questions were: Are most people mentally healthy? How

do I know if I have good mental health? Are all people who are physi-

cally ill mentally ill, too?

Three true-false test items (Appendix D), true-false 8, 9, 10) per-

tained to this objective; 97 per cent of the students answered test item

number eight correctly, 92 per cent test item number nine, and 98 per

cent test item number ten. The students participated by suggesting

several additions to the transparency lists as well as taking part in

the discussions. One of the teachers remarked, "At first I believe the

students had mental health confused with insanity but the panel helped

clear up their confusion; the nurse answered many of their questions in

this area."

At the conclusion of behavioral objective number twenty-eight the

teachers administered the posttest.

<u>Summary</u>

Objective number twenty-eight was the only objective developed to meet the needs of the students in the area of mental health and the team as a group felt this was the weakest part of the curriculum and needed more work; they suggested that it be expanded and interrelated more with the other three areas.

## Summary

This chapter was concerned with the implementation of the curriculum and the testing of the output which is the fifth part of the plan for designing curriculum.

The statistical analysis of the data from the pre- and posttests showed a significant difference in the scores beyond the .01 level of confidence. It was assumed that part of the difference was due to the curriculum. Each behavioral objective was discussed and the results of the implementation are explained in detail.

The final part of the plan, change curriculum to improve, will be discussed in Chapter V. The study will be summarized, conclusions will be stated, implications will be drawn, and recommendations will be made for further study.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND

RECOMMENDATIONS FOR FURTHER STUDY

## Summary

This chapter summarizes the findings of a study undertaken to
develop, implement, and evaluate a curriculum in the area of health,
interrelating the teaching of selected aspects of home economics and
selected aspects of physical education for sixth grade students in
Rogers Middle School.

A review of the literature pointed out (1) the need for develop-
ment of curriculum materials for the middle schools in all subject mat-
ter areas, (2) the emphasis of the middle school organization on an
interdisciplinary approach to curriculum, (3) that children at the ages
of ten, eleven, and twelve have definite characteristic interests in
the areas of physical development, grooming, and nutrition, and (4) that
emphasis on self-understanding is an outstanding characteristic of the
middle school.

The curriculum was developed with the assistance of a team of
teachers and administrators, composed of two home economics teachers, a
boys' physical education teacher, a girls' physical education teacher,
the school nurse, the principal, and the assistant principal at Rogers
Middle School in Oklahoma City.

A plan for designing a curriculum was employed by the team. The parts of the plan were

1. Diagnose Needs - The needs of students in the sixth grade at Rogers were diagnosed (1) through a self-esteem inventory, (2) an interest inventory administered by the school counselors, (3) through literature and research, and (4) teacher opinion.

2. Formulate objectives - objectives were based on the diagnosis of needs and stated in terms of measurable learner behaviors.

3. Develop evaluation - evaluation, developed for each behavioral objective, took several forms including (1) pencil and paper responses, (2) observations, and (3) student personal involvement. A pre- and posttest, based on various behavioral objectives, was developed by the team.

4. Analyze and develop learning experiences - for each behavioral objective, one or more learning experiences were formulated. Resources and materials for each learning experience were identified or developed by the team.

The curriculum was reviewed and evaluated by a group of curriculum specialists. Suggestions were evaluated by the team and curriculum changes were made.

5. Implement and test output - the curriculum was implemented during the last nine weeks of the school year 1971-1972 with 82 sixth grade boys and girls at Rogers Middle School. The four teachers who served on the development team were the four teachers to implement the curriculum. Supportive

help was given by the researcher throughout the implemen-
tation of the curriculum.

The teachers reported the results of the implementation
of each behavioral objective on teachers' logs. Each ob-
jective was listed, any changes made in the learning experi-
ences, resources and evaluation were noted, and the results
of the evaluation were reported.

The pretest was administered before implementation and
the posttest at the finish of the implementation of the cur-
riculum. The results of the pre- and posttests were ana-
lyzed using the t test to find out the correlation between
the pretest and posttest mean comparisons. The t value was
significant beyond the .01 level of significance which
indicated there was a significant difference in the scores
of the students on the pre- and posttests. It was assumed
that part of the difference was due to the curriculum.

6. Change to improve - this is the sixth and last part of the
plan and gives feedback to the beginning of the plan. The
following recommendations for change were made by the team
members: (1) the parts of the curriculum which include emo-
tional, social, and mental health should be expanded, (2)
other subject matter areas could be interrelated for spe-
cific objectives, such as science in the food tests, art
in making the collage, and language arts in writing state-
ments, (3) the counselors, because of their educational
background and experience, should become members of the
team during the implementation of the area concerned with

emotional health, (4) more outside resource people
should be included in the learning experiences. Sug-
gestions include: a dietitian for the nutritional needs,
an athlete during the physical fitness, and a dental
technician for care of the teeth, (5) other curriculum
changes should be made as the diagnosis of needs of the
group for whom it is intended indicates the need for
change.

## Conclusions

This study was concerned with the development, implementation and
evaluation of a curriculum interrelating selected aspects of home eco-
nomics with selected aspects of physical education for a health program
at the sixth grade level in Rogers Middle School. The results of this
study led the researcher to draw the following conclusions:

1. The involvement of administration in the development of
   curriculum affords more understanding on the part of both
   administration and teachers as to the others' problems,
   responsibilities and limitations.

2. When selected aspects of one discipline are interrelated
   with similar selected aspects of another discipline, such
   as health aspects of home economics with health aspects of
   physical education, the repetition leads to reinforcement
   of the objectives for the teachers as well as for the
   students.

3. If curriculum is being developed for a given group of stu-
   dents, the needs of those students should be assessed first

and the results of the assessment used to give a basis
for the formulation and development of objectives and to
personalize the curriculum.

4. When the teachers who are to implement a curriculum are
actively involved in its development, there is a great
deal of interest and effort on the part of the teachers
to make each part of the curriculum meaningful and accom-
plish its intended objective.

5. Curriculum should be flexible to allow for changes, addi-
tions and deletions as the need arises during implementation.

6. The evaluation of the curriculum should not be based entirely
on the correlation of the pre- and posttest scores but also
on student participation, interest and daily achievement
as well as teacher evaluation.

## Implications

The study showed that sixth grade boys and girls can learn the
principles of good health practices in a way to make them meaningful
and to motivate students to try them.

The study further demonstrated that disciplines customarily con-
sidered unrelated, can be interrelated for effectively meeting the needs
of students.

The study would seem to indicate that such interrelating of select-
ed aspects of home economics and selected aspects of physical education
with still other disciplines could be effective and could achieve simi-
lar understandings and utilization by the students.

Recommendations For Further Study

The results of this research suggest the following recommendations for further study. It is recommended that:

1. Home economics be interrelated with other subject matter areas, such as science in food science or ecology, art in home decoration and clothing, social studies in career exploration, and economics in family finance. These inter-relationships could be short units or in combination with several other areas extending through a semester or year.

2. This particular curriculum interrelating home economics and physical education be expanded to a semester or full year program.

3. Home economics materials for the sixth grade student be developed on a reading level compatible with his reading ability and his background of experience, interests, and comprehension.

4. A similar unit of study at a more mature level be developed and implemented at the seventh and/or eighth grade level.

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APPENDIX A

SELF-ESTEEM INVENTORY

SELF-ESTEEM INVENTORY
DEPARTMENT OF RESEARCH AND STATISTICS
OKLAHOMA CITY PUBLIC SCHOOLS

V_____ I_____                                    L Score_____ SE Score_____

Name_____School_____

Teacher_____Grade_____Date_____

Sex_____Age_____Race_____

INSTRUCTIONS: If the statement describes how you usually feel, put a
check (√) in the column "LIKE ME." If the statement does not describe
how you usually feel, put a check (✔) in the column "UNLIKE ME." There
are no right answers. Words or phrases in parentheses add meaning to
the statement.

|  |  | LIKE ME | UNLIKE ME |
|---|---|---|---|
| 1. | I spend a lot of time daydreaming. | ____ | ____ |
| 2. | I'm pretty sure of myself | ____ | ____ |
| 3. | I would rather be myself than anyone else. | ____ | ____ |
| 4. | I'm easy to like. | ____ | ____ |
| 5. | I enjoy talking in front of the class. | ____ | ____ |
| 6. | I worry about everything. | ____ | ____ |
| 7. | I wish I were younger. | ____ | ____ |
| 8. | There are many things about myself that I would change if I could. | ____ | ____ |
| 9. | I can make up my mind without too much trouble. | ____ | ____ |
| 10. | I'm a lot of fun to be with. | ____ | ____ |
| 11. | I'm happy with (proud of) my school work. | ____ | ____ |
| 12. | I always do the right thing. | ____ | ____ |
| 13. | Someone usually has to tell me what to do. | ____ | ____ |
| 14. | I can adjust to (get used to) new things easily. | ____ | ____ |
| 15. | I seldom do things that I am sorry for later. | ____ | ____ |

|  | | LIKE ME | UNLIKE ME |
|---|---|---|---|
| 16. | I have many friends my own age. | ___ | ___ |
| 17. | I do the best work that I can in class. | ___ | ___ |
| 18. | I'm always happy. | ___ | ___ |
| 19. | I don't give in easily when I think I'm right. | ___ | ___ |
| 20. | I can take care of myself. | ___ | ___ |
| 21. | I'm usually happy. | ___ | ___ |
| 22. | I would rather play with children younger than I am. | ___ | ___ |
| 23. | I don't like to be called on in class. | ___ | ___ |
| 24. | I like everyone I know. | ___ | ___ |
| 25. | I have reasons for the things that I do. | ___ | ___ |
| 26. | Things are all mixed up in my life. | ___ | ___ |
| 27. | I can make up my mind and stick to it. | ___ | ___ |
| 28. | Kids like my ideas. | ___ | ___ |
| 29. | I'm not doing as well in school as I'd like. | ___ | ___ |
| 30. | I never get fussed at (scolded). | ___ | ___ |
| 31. | I really like being a boy (or girl). | ___ | ___ |
| 32. | I'm not ashamed of what I am. | ___ | ___ |
| 33. | I like the way that I look. | ___ | ___ |
| 34. | I like being with other people. | ___ | ___ |
| 35. | I seldom feel upset (uneasy) in school. | ___ | ___ |
| 36. | I'm never bashful. | ___ | ___ |
| 37. | If I have something to say, I say it. | ___ | ___ |
| 38. | I don't care what happens to me. | ___ | ___ |
| 39. | I think I'm doing O.K. | ___ | ___ |
| 40. | Kids pick on me. | ___ | ___ |

|  | LIKE ME | UNLIKE ME |
|---|---|---|
| 41. My teacher likes me. | ___ | ___ |
| 42. I always tell the truth. | ___ | ___ |
| 43. I really get upset when I'm fussed at (scolded). | ___ | ___ |
| 44. Things usually don't bother (upset) me for very long. | ___ | ___ |
| 45. I can be trusted. | ___ | ___ |
| 46. Other people are liked better than I am. | ___ | ___ |
| 47. My school work makes me feel discouraged (hopeless). | ___ | ___ |
| 48. I always know what to say to people. | ___ | ___ |

APPENDIX B

INTEREST INVENTORY

Name_____

## INTEREST INVENTORY

Which questions would you like to discuss in class or have more information on?  Place a check in the square in front of the questions you would like discussed and answered.

☐    1.  What makes me grow the way I do?

☐    2.  What foods do I need to grow?

☐    3.  What do foods have to do with my endurance in activities?

☐    4.  Why is breakfast such an important meal in the day?

☐    5.  What kinds of exercise will make me better in sports?

☐    6.  How much sleep and rest should I get?

☐    7.  What makes a girl or boy popular with the group?

☐    8.  What do foods, sleep and exercise have to do with my looks?

☐    9.  Why should we have definite rules by which we live?

☐    10.  Why do we have a thing like "good manners"?

☐    11.  What makes a "good sport"?

☐    12.  What is a habit; how is it formed?

☐    13.  How does my physical health affect my school work?

☐    14.  Why do some people get upset easily?

☐    15.  What should I do when I am angry?

☐    16.  When I am upset, how can I keep from speaking or acting without thinking?

☐    17.  What is wrong with "hating" certain people?

☐    18.  How can a person keep from being afraid of things like tests and teachers?

☐    19.  How can I learn to be at ease or comfortable with other people?

☐    20.  What is wrong with making excuses when I get in trouble?

☐  21.  What are some ways I can improve my self-control?

☐  22.  Why is honesty the best policy at all times?

☐  23.  Why don't I grow in height and weight the same as all my
        friends?

APPENDIX C


MIDDLE SCHOOL 6TH GRADE CURRICULUM

MIDDLE SCHOOL
6th Grade Curriculum
Interrelating Home Economics and Physical Education

Concept:       Physical health involves the body and its needs.

Sub-concept:  Food is made up of different nutrients needed for growth and health.

Objective:     Develop an awareness of the nutritional needs of the body.

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 1. Behavioral Objective:<br>The student will be able to demonstrate his understanding that foods are classified into four groups by identifying foods in each group.<br><br>Evaluation:<br>Test item | Assign reading "What You Eat."<br><br>Use overhead transparencies to explain the four food groups and daily servings needed.<br><br>Conduct a class discussion over reading and transparencies.<br><br>Example questions for discussion:<br>1. Why is it helpful for foods to be divided into four groups?<br>2. Why are eggs and dry beans in the meat group?<br>3. How often should you have a dark green or deep yellow food from the fruit and vegetable group? | Pages 3-7 Lessons in Living by Davis and Peeler.<br><br>Transparencies from Universal Education and Visual Arts.<br>Transparencies:<br>1. Choose from The Basic Four<br>2. Bread and Cereal Group<br>3. Milk Group<br>4. Fruit and Vegetable Group<br>5. Meat Group |

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 2. Behavioral Objective:<br>The student will be able to demonstrate his understanding of nutritional needs for himself by analyzing his food intake for a day.<br><br>Evaluation:<br>Check students record sheets. | Study school lunch menus to identify the four food groups.<br><br>On forms provided, have students record the food they ate for one day and identify the four food groups. Determine if the number of required servings were eaten. | Secure menu from cafeteria manager.<br><br>Menu record sheets from the National Dairy Council. |
| 3. Behavioral Objective:<br>The student will demonstrate his ability to use the Four Food Groups as a guide by planning a balanced selection of foods for one day.<br><br>Evaluation:<br>Observe participation of group work. | Have students work in groups of four. Each group selects foods - (Use food models) for one day, breakfast, lunch and dinner which is balanced according to the Four Food Groups. When groups have finished, discuss each groups choice. | Food models may be secured from the National Dairy Council.<br><br>Two or more sets of food models may be necessary. |
| 4. Behavioral Objective:<br>The student will demonstrate his understanding that foods are composed of nutrients by identifying major nutrients (protein, fat & carbohydrate) in given foods. | Discuss the nutrients and their basic function in the body.<br><br>Conduct experiments to test for carbohydrates, protein and fat. | Pages 9-14 in booklet "How Your Body Uses Food" from the National Dairy Council.<br><br>Tests explained in Appendix A. |

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| Evaluation: <br> Test item | | |
| 5. Behavioral Objective: <br> The student will be able to identify ways in which major nutrients are used in the body. <br><br> Evaluation: <br> Test item | Use overhead transparencies to explain the major nutrients and how they are used in the body. <br><br> Transparencies: <br> 1. Food is used by the body to <br> 2. Proteins <br> 3. Fats <br> 4. Carbohydrates | Transparencies from Universal Education and Visual Arts. |
| 6. Behavioral Objective: <br> The student will demonstrate the principle that foods are grouped according to their nutrient content by classifying foods into the appropriate group when given their major nutrient content. <br><br> Evaluation: <br> Observe participation of students. | View film "Food that Builds Good Health". Review and discuss the nutrients and what foods they are found in. Set up four tables each one representing a food group, using food models, let each student draw a food and place it in its proper food group naming the major nutrient in the food. | Film from Oklahoma City Public School Media Center #21-6-18 color – 11 min. Describes the elements of the four large food groups that help supply the body's needs for protein, carbohydrates, fats, vitamins, minerals and water -- the meat group, milk group, bread & cereal group and the vegetable-fruit group. |

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 7. Behavioral Objective: The student will be able to demonstrate his aware- ness of advertising tech- niques by preparing a sales presentation for a given food item. This can be in the form of a draw- ing, commercial, song, etc. Evaluation: Students sales presenta- tion. | Present a collection of advertise- ments, food packages or slides. Conduct a class discussion about advertising and what students should look for. Students may recall television advertising which they would like to discuss. Bring out such things as facts presented, attractiveness, is advertising misleading, etc. | Current magazines, local news- papers and empty boxes and cartons. |

Sub-concept: Body growth is influenced by a variety of factors.

Objective: Develop an awareness of how the body functions.

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 8. Behavioral Objective: The student will become aware of and start his physical growth record by figuring his present growth rate.<br><br>Evaluation: Observe student participartion and interest. | Weigh and measure each student and provide the charts and directions for figuring his growth rate. Help students figure their own growth rate. | National Dairy Council materials from booklets "A Girl and Her Figure" pages 4, 5, and 6 and "A Boy and His Physique" pages 5, 6. |
| 9. Behavioral Objective: The student will be able to discuss how the body works by answering the following questions:<br>1. Which part of the body controls everything you think and feel and do?<br>2. What gland has much to do with your growth?<br>3. Why must the food you eat be digested?<br><br>Evaluation: Test item | Use a plastic invisible man to show the different parts of the body, the tape explains the different parts of the body.<br><br>or<br><br>Use wall charts and drawings showing the different parts of the body. The tape script can be used for lecture materials or copied and used for student materials. | Appendix B for script on tape about the human body. |

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 10. Behavioral Objective: The student will demonstrate his understanding of digestion by identifying where carbohydrates begin to change and where proteins and fats are digested. | Assign reading to students. Conduct a class discussion using overhead transparencies. <br> 1. Carbohydrate begins to change in the mouth. <br> 2. Proteins are digested in the stomach and in the small intestine. <br> 3. Fats are digested in the small intestine. <br> 4. Nutrients reach all of your cells through the bloodstream. | Pages 18-22 in booklet "How Your Body Uses Food" from the National Dairy Council. <br><br> Masters for transparencies in Appendix C. |
| Evaluation Test item. | Suggested questions for discussion: <br> 1. Where are eggs digested? <br> 2. What happens to fats in the mouth? <br> 3. How do nutrients reach the cells of your body? <br><br> Conduct experiments showing what happens to milk in the stomach. | Experiment explained in Appendix D. |
| 11. Behavioral Objective: The student will be able to identify some of the main bones in the skeleton, be able to discuss how strong bones are built and what the skeleton does for the body. | Show film "The Skeleton" as an introduction to study of the skeleton. <br><br> Discuss the main bones of the skeleton using diagrams, overhead transparencies or a skeleton model. Students can fill | Film available from Oklahoma City Public School Media Center - 13 min. in length. (Uses animated drawings to illustrate the composition, growth, movement and function of the human skeleton. Explains the importance of proper food and posture in |

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| | in names on student sheets during discussion. | correct bone development.)  Transparencies available from: Oklahoma City Public School Media Center. |
| Evaluation: Student study sheets. Test items. | Assign reading to students, "The Care of the Skeleton". Have students answer questions on student study sheets. | Reading: pages 174-176 Laidlaw Health Series Grade 6 by Byrd and others.  Student study sheets in student material. |

Sub-concept: Daily exercise and activity help keep you physically fit.

Objective: Develop an awareness of the relationship between physical activity and physical health.

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 12. Behavioral Objective: The student will be able to demonstrate his understanding of physical fitness by explaining the importance of exercise.<br><br>Evaluation: Answers to questions | Assign reading "Exercise".<br><br>Have students answer questions at the end of the reading.<br><br>Use these questions as class discussion. | Reading "Exercise" in student materials. Questions at the end of reading. |
| 13. Behavioral Objective: The student will become aware of his physical fitness by participating in a physical fitness test.<br><br>Evaluation: Participation in physical fitness test. | Students will participate in individual physical fitness tests. | Physical fitness test, see Appendix E.<br><br>Student check sheet in student materials. |

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 14. **Behavioral Objective:** The student will be able to demonstrate exercises that will help make or keep him physically fit. <br><br> **Evaluation:** Observation of student. | Students will perform and practice physical fitness exercises under the observation of the teacher and given help and correction where necessary. | |

Sub-concept: The development of good grooming habits promotes total physical health.

Objective: Develop an awareness of the importance of good grooming.

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 15. Behavioral Objective: The student will be able to rate his own grooming standards.<br><br>Evaluation: Students' "Good Grooming Charts" | Each student will rate himself on the "Good Grooming Chart". | "Good Grooming Chart" in student materials. |
| 16. Behavioral Objective: The student will be able to set up standards for grooming in relation to body cleanliness, care of the complexion, care of the hair, and care of the hands and feet.<br><br>Evaluation: Test items. | Assign readings on body cleanliness, care of the complexion, hair, hands and feet. Discuss readings. Some students may be assigned special reports on grooming. | Use as reading material<br>Lessons in Living - Publisher<br>Ginn & Co. 1970 Edition<br>    Keeping Your Body Clean<br>    pp. 248 and 249<br>    Caring for Your Complexion<br>    pp. 251 to 253<br>    Caring for Your Hair<br>    pp. 255 to 257<br>    Caring for Your Hands & Feet<br>    pp. 264 to 266<br>For discussion |

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 17. Behavioral Objective:<br>The student will become aware of the present care of his teeth by participating in a cleanliness test at home.<br><br>Evaluation:<br>Student reports on test for cleanliness done at home. | Secure an outside speaker (dentist or if none is available, the school nurse could make the presentation) to explain the importance of taking care of the teeth and to demonstrate the proper way to brush the teeth. | Kits available from:<br>Proctor and Gamble<br>Professional Services<br>P. O. Box 747<br>Cincinnatti, Ohio 45201 |
| 18. Behavioral Objective:<br>The student with the help of the instructor will be able to analyze his own posture and determine ways of improving his posture.<br><br>Evaluation:<br>Posture analysis sheets and students' comments on improvement. | Students will participate in individual posture analysis with the aid of the instructor.<br><br>After each individual posture analysis the student will be shown ways of improving his posture.<br><br>Assign reading "Points on Posture". Discuss reading, have students demonstrate proper ways of standing correctly, walking correctly and sitting correctly.<br><br>View film "Posture and the Keyboard". Discuss film with the class. | Material charts and posters are available from National Dairy Council.<br><br>Posture analysis sheets in student materials.<br><br>Use as reading material "Lessons in Living" book by Ginn and Company. pp 268 to 270<br><br>Film available from Oklahoma City Public School Media Center #25-4-11 14 min. - Color<br><br>(Using many motion picture techniques that cannot be duplicated easily in the classroom, this film shows students the fine points and adjustments in good posture.) |

Concept: Emotionally healthy people feel right about themselves and others.

Sub-concept: Emotional health is reflected by a person's feelings.

Objective: Develop an awareness of different emotional feelings and needs.

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 19. **Behavioral Objective:** The student will be able to list some of the emotional feelings of people and participate in a class discussion on ways to manage these feelings.<br><br>**Evaluation:** Students' participation in discussion. | Assign reading "Learning to Manage Our Emotions Wisely" and conduct a class discussion after reading, using overhead transparencies showing joy, love, excitement, anger, sorrow, and fear. Have students suggest ways of managing each of these feelings. | Reading "Learning to Manage Our Emotions Wisely" in student materials.<br><br>Transparency masters in Appendix F. |
| 20. **Behavioral Objective:** The student will be able to identify some of his own emotional feelings.<br><br>**Evaluation:** Students' written statement. | Students will participate in a game of volleyball, after the game the students will discuss how it feels to win or lose, to play well or make mistakes, how they feel about teammates. After the discussion ask students to complete in writing the following statement. During the volleyball game I felt _____ because _____. | |

| Behavioral Objective & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 21. Behavioral Objective: The student will be able to identify some basic emotional needs.<br><br>Evaluation: Test item. | Conduct a class discussion using an overhead transparency which lists the following basic emotional needs:<br>1. You need to like and be liked.<br>2. You need to respect and be respected.<br>3. You need to feel that you are important as a person.<br>Have students add to the list as you write them on the transparency. Some suggested additions.<br>4. You need to accomplish something.<br>5. You need to have a good example to follow.<br>6. You need to have a feeling of security.<br>7. You need to admire and to be admired. | Transparency master in Appendix G. |

Sub-concept:   Personality is the sum total of all the things that go into making a unique individual.

Objective:     Develop an understanding of what personality means.

| Behavioral Objectives & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 22.  Behavioral Objective:<br>    The student will be able to analyze his personality by rating his personality on rating sheet.<br><br>Evaluation:<br>    Observation of interest and participation. | Explain the rating sheet "What is Your Personality Rating?" to students.  After students have rated themselves help them arrive at their score.  Explain what the score means. | Rating sheet "What is Your Personality Rating" in student materials. |
| 23.  Behavioral Objective:<br>    The student will be able to demonstrate his understanding that physical characteristics and personality identify him.<br><br>Evaluation:<br>    Collage and explanation or group discussion participation. | Assign readings and then have students construct a collage which describes their personalities, and answers the question "What Am I".  Each student should be given an opportunity to explain his collage to the class.  Explanations could be limited to one minute each.<br><br>or<br><br>Assign reading on Personality.  Conduct a class discussion or have small group buss sessions over readings. | Readings "Lessons in Living" pp 257 to 258<br><br>Students should be shown examples of collages.  In order for a collage to describe a personality each fragment should tell something about the pupil.  The assembled collage should reflect the unique personality of the pupil.<br><br>Directions and material needed for a collage are in Appendix H. |

| Behavioral Objectives & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 24. Behavioral Objective:<br>The student will be able to recognize some ways of improving his personality.<br><br>Evaluation:<br>Students' written statements. | Students write a brief statement. I can improve my personality by _____. | |

Concept:       Social Health is reflected by a person's actions toward others.

Sub=concept:   Social Maturity is satisfying personal needs and wants in a socially acceptable way.

Objective:     Develop student awareness of social maturity.

| Behavioral Objectives & Evaluation | Learning Experiences | Resources and Materials |
| --- | --- | --- |
| 25. Behavioral Objective:<br>The student will be able to demonstrate an understanding of his social maturity by participating in a social maturity test.<br><br>Evaluation:<br>Observe student participation in social maturity test and discussion. | Explain the "Test for Social Maturity" to the students. After the students have finished the test help them decide what their score is and explain what the score means.<br><br>Assign readings on "Growing in Social Maturity" after students have finished their reading. Use each item on the "Test for Social Maturity" as a basis for class discussion. | Test for Social Maturity is in student material.<br><br>Directions for scoring is in Appendix I.<br><br>Reading:<br>Health  Level 6<br>pp 42 to 48<br>Laidlaw Brothers, Publishers |

Sub-concept:   Good Manners are simply a sincere and kindly consideration of others.

Objective:    Develop an awareness that a person is judged by his good manners.

| Behavioral Objectives & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 26.  Behavioral Objective:<br>The students will be able to define etiquette and good manners.<br><br>Evaluation:<br>Test item. | Read Assignment "Cultivating Good Manners" either aloud or as student reading assignment.  Discuss with the pupils the importance of good manners.  Be sure students understand that:<br>1.  Good manners are a sign of consideration.<br>2.  Good manners are a sign of courtesy and respect.<br>3.  Good manners give a person poise and self-confidence. | Reading Assignment<br>pp 48 to 53 Textbook   Health Level 6<br>Laidlow Brothers, Publishers |
| 27.  Behavioral Objective:<br>The student will be able to list some of the do's and don'ts of good manners at home, school, and in public.<br><br>Evaluation:<br>Test item. | Divide students into small groups assign each group the task of listing some do's or some don'ts of good manners.  Suggested areas: home, school, public, cafeteria, school bus, and telephone.<br><br>Provide each group with a transparency and pencil, have them list two or more do's and don'ts of good manners.  One student from each group will present their ideas to the class. | Suggested additional readings:<br>Book:  Choosing Your Goals<br>pp 13 to 14<br>Lyons and Carnahan, Publishers<br><br>Transparencies and pencils |

Concept:    Mental health affects physical, emotional and social health.

Objective:  Develop an awareness of the relationship of mental health with physical, emotional, and
            social health.

| Behavioral Objectives & Evaluation | Learning Experiences | Resources and Materials |
|---|---|---|
| 28.  Behavioral Objective: The student will be able to demonstrate his understanding of mental health by describing a mentally healthy person.<br><br>Evaluation: Student participation in discussion and contribution to transparencies. | Read assignment "What is Mental Health?" either aloud or as a student reading assignment.<br><br>Use overhead transparencies and conduct a class discussion to help show the relationship of mental, emotional, social, and physical health. Have students to suggest things to list under each heading as you list them.<br><br>Transparency I - Mentally healthy people usually feel comfortable with themselves. (emotional health)<br><br>Transparency II - Mentally healthy people feel kindly about other people. (social health)<br><br>Transparency III - Mentally healthy people are able to meet the physical demands of life. (physical health) | Reading assignment "What is Mental Health?" in student material.<br><br>Transparency masters in Appendix J.<br><br>Suggestions for filling in transparencies in Appendix K. |

APPENDIX D

CURRICULUM PRE- AND POSTTEST

Pre- and Posttest

Directions:

For each of the following questions choose the correct answer from the four possible answers listed.

Write the number of your choice in the blank at the left of the question.

_____ 1. The bread and cereal food group includes which one of the following foods?
1. sugar
2. milk
3. rice
4. eggs

_____ 2. The milk food group includes which one of the following foods?
1. butter
2. oranges
3. eggs
4. ice cream

_____ 3. In which one of the following foods is protein the main nutrient?
1. butter
2. eggs
3. apples
4. biscuits

_____ 4. The nutrient which builds and repairs the body is?
1. carbohydrate
2. fat
3. protein
4. Vitamin C

_____ 5. Which part of the body controls everything you think, feel and do?
1. heart
2. liver
3. brain
4. stomach

_____ 6. Which gland has much to do with your growth?
1. gall bladder
2. pituitary
3. liver
4. stomach

_____ 7. The digestion of fat takes place in what part of the body?
1. mouth
2. stomach
3. lungs
4. small intestines

_____ 8. The digestion of carbohydrate begins in what part of the body?
1. mouth
2. stomach
3. lungs
4. small intestines

_____ 9. Which one of the following is a basic emotional need of people?
1. the need to cry a lot
2. the need to like and be liked
3. the need to get mad at people and have people mad at you
4. the need to be afraid of more things

_____ 10. How can you develop good manners?
1. Good manners come naturally
2. Good manners must be practiced
3. You are born with good manners
4. Good manners cannot be developed.

Directions:
   Decide which of the following statements are true or false. If the statement is true, place a "T" in the blank in front of the statement. If the statement is false, place a "F" in the blank in front of the statement.

_____ 1. Foods are divided into the four food groups by their color.

_____ 2. There are 58 bones in the human skeleton.

_____ 3. Strong bones require a great deal of calcium and phosphorus.

_____ 4. Body cleanliness is a part of good grooming.

_____ 5. Good manners are a sign of consideration.

_____ 6. It does not matter what strangers think of your behavior.

_____ 7. Once food is digested, it is carried by the blood stream to various cells in the body that need it.

_____ 8. Mental health has to do with the ways people think, feel, and act.

_____ 9. Mental health is more important for people who are old than people who are young.

_____ 10. It is usually not necessary for a mentally healthy person to seek help or guidance from others.

APPENDIX E

MATERIALS AND RESOURCES USED FOR

DEVELOPMENT OF CURRICULUM

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APPENDIX F

EXAMPLES OF TEACHERS' MATERIALS

Tests for carbohydrates (starch and sugar):

Starch:
1.  Mix two tablespoons cornstarch with 1/2 c. water.
2.  Prepare a fresh solution of 3/4 teaspoon of iodine and 1/2 c. of water.
3.  Add a few drops of the iodine solution to the cornstarch solution.
4.  A purple color will develop.  (This purple color is a positive indication that starch is present.)
Try the test with other foods.  Add drops of the iodine solution to foods to test for starch. Some foods that do not contain starch are meat, cheese, and apples.

Sugar:
1.  Put corn syrup in a test tube.
2.  Add about one ounce of Benedict solution.  (Benedict solution may be purchased at a pharmacy.)
3.  Heat, and wait for blue color to change to red-orange.  (This red-orange color is a positive indication that sugar is present.)
Try the test with other foods.  Put a small piece of food in a test tube, add about one ounce of Benedict solution, heat, and wait for the color change.  Some foods that do not contain sugar are meat, cheese and nuts.

Test for Protein:

Smell a burning feather.  The odor of burning Protein is distinctive.  (This odor is a positive indication that protein is present.)  Burn various foods on a piece of aluminum foil placed on a hot plate to determine those that contain protein.  Some foods that contain protein are meat, beans, cheese, and eggs.  Some foods that do not test positive for protein are tomatoes, oranges and celery.  The meat tested must be raw.

Test for Fat:

Rub some fat on wrapping paper.  (The grease spot is a Positive indication that fat is present.)  Some foods that contain fat are cheese, nuts, and hamburger.  Some foods that do not contain fat are oranges, tomatoes, and carrots.  Readings must be made after paper has dried.

APPENDIX B


A TALK ABOUT THE HUMAN BODY


        Imagine!  If you could suddenly see through your skin, and most of your blood vessels and your nerves
and all of your muscles should disappear, you would find that inside you look much like me.  But you must
keep in mind that none of my organs perform independently.  They all work together to make the human body
the miraculous creation it is.  Its intricate parts make it far more complicated than any machine ever
designed.

        First of all let's talk about the brain and nerves.  The brain is the highly complex organ that serves
as the "central exchange" of the nervous system; it receives messages from the outside world and directs
the body how to respond.  Here you think, create ideas, reason, and remember.  Here, too, dwell your con-
science and your will.  Messages of sensation, such as those of light, sound, touch, pain, cold and heat,
are carried over a network of sensory nerves to the spinal cord and brain.  The brain sends orders for
action over another network of nerves, called motor nerves, to the muscles of a particular part of the body.
So you must remember that the brain is the part of the body which controls everything you think, feel, and
do.

        Next we will consider the bones and muscles.  A framework of bones called the skeleton supports your
body.  There are more than 200 of these bones in your skeletal system.  Besides supporting the body, the
bones make it possible for you to move about.  You can not see my muscles as they have been left out so you
can see inside my body.  These skeletal muscles, with the bones, help you to move about.

        On the underside of your brain, too deep for you to see, lies the pituitary gland, that is spelled
p-i-t-u-i-t-a-r-y and pronounces pi-tu-i-tar-y.  This gland is the smallest of all that are in your body,
and yet it is probably the most important.  It is about the size of a dime, it is located within the skull,
and is surrounded by the brain.  It puts out a chemical substance called a hormone.  One of these hormones
is the growth hormone, it is sent into the blood stream only during the growing-up years.  Then the pitui-
tary gland stops making this special growth hormone.  After that, while the body may grow heavier, it will
not grow taller.

        Just as you do not see my muscles in a transparent model designed as I am, neither do you see my skin;
but for the moment, suppose that you can.  This wonderful organ, the skin, forms a protective coat over all

the body surface.  It covers the muscles, bones, and tissues and helps keep dirt and harmful bacteria out of the body.  The nerve endings in your skin provide your sense of touch.  These nerve endings send messages to the brain about the things you touch, about whether these things are smooth or rough, hot or cold, soft or hard.  Special nerve endings also send messages of pain.

The lungs are the lightest of all the large organs in the body.  They are made up of hollow passages that branch out and become increasingly smaller until they end in millions of clusters of tiny sacs always filled with air.  The numerous tiny blood tubes known as capillaries, this is spelled c-a-p-i-l-l-a-r-i-e-s and pronounced cap-il-lar-ies, surround these air sacs.  It is through these very small air sacs that a truly life-giving exchange takes place:  here the red blood cells in the capillaries receive oxygen from air you have inhaled and here waste carbon dioxide is released for you to exhale.  You breathe on an average of sixteen times a minute, waking and sleeping, all your life.  Some of the other parts of the body that help you breathe are the nose, throat, windpipe, and the bronchial tubes.  These bronchial tubes branch off from the windpipe and one leads into each lung.

The blood vessels under the skin help regulate your body temperature.  The network of tiny capillaries just beneath the outer part of the skin can get small or they can get large, according to your body's need to conserve warmth or to be cooled.  Your body is always making heat, and some of the heat is always going from your body into the air outside.  When you go out into the cold, the tiny capillaries under your skin get smaller.  Less blood can then enter the capillaries.  This means there is less heat going out from the blood into the air and more heat is kept in your body.

Your larynx is your voice box.  It contains the vocal cords, two membranes stretched part way across the upper windpipe, that vibrate to produce speech and all other oral sounds.  You control pitch by varying the tension on your vocal cords, and volume by regulating the amount of air passing through the larynx.  For instance, when you want to shout you draw a deep breath; and when you want to whisper, you hold your breath.  Turn to the person sitting next to you and whisper "who are you", and you will see that you are holding your breath.

The digestive system changes the food you eat into a form the body can use as fuel to carry on its work.  One of the important organs that helps during the process of digestion is the stomach.  The stomach works like a churn.  It receives all the food you eat, food that comes down to it through the food tube, or esophagus, from the mouth and throat.  In the stomach the food is mixed with digestive juices.  Then the exit of the stomach, working on its own well regulated timetable, opens and allows just a little food to pass into the small intestine.  This performance is repeated at regular intervals during the next several hours, or until all the food has passed through.  Then you begin to feel hungry again.

The small intestine, if stretched out, would be a narrow tube some 21 feet long, or almost as long as the end of your class room. Within it, digestion is completed. Though your mouth and your stomach begin the work of digestion, it is in your small intestine that the major processing of food for absorption by the body takes place. Digestion is completed in the upper 7 feet of the small intestine by digestive juices from the small intestine and from the liver and the pancreas.

The liver, which is the largest gland in the body, secretes a bitter, green substance called bile. Bile is very necessary for digestion. It pours from the liver into the small intestine to help digest the fats you eat. The liver has other functions as well. For example it converts excess blood sugar into glycogen, a form in which you store sugar in the body until it is needed. Your liver neutralizes poisons that may by chance have entered your blood stream; and from your blood the liver extracts waste products which are excreted eventually through the large intestine. In addition, the busy liver produces one of the substances essential to the forming of your red blood cells.

Your gall bladder is a muscular sac about the size of a small pear; it stores reserve bile from the liver. Bile is also named "gall". Since your liver constantly manufactures more bile, this storehouse is not really essential. And so the gall bladder may be removed if it becomes infected or if gallstones form and cause trouble.

The pancreas is a gland that produces at least three digestive juices and sends them into your small intestine to do their work. There are also tiny glands which secrete insulin, which is so necessary for helping your body use sugar. If your insulin supply should fail, you would develop the disease known as diabetes. Do you know of any one who has diabetes?

Your heart is responsible for the circulation of the blood. It is really a muscular pump, electrically controlled, which propels blood throughout the body about 70 times a minute or over 100,000 times a day. As the blood circulates, needed materials such as digested food and oxygen are carried to the body cells, and wastes such as carbon dioxide are carried away from the cells. Your heart, if you are about twelve years old, beats about 90 times a minute. But the heartbeat varies in different people and in different situations. Exercise, for example, or strong emotions can speed up the heartbeat. The heart and the network of blood vessels form what is known as the circulatory system. This network consists of thousands of miles of blood vessels that spread all over the body. The arteries carry blood laden with food nutrients and oxygen to every part of the body. These blood vessels are painted red. Your veins (the blue ones) return to your heart the blood carrying waste products. The blood is next routed to the lungs; here carbon dioxide is expelled and oxygen is taken in. The blood, refreshed with oxygen, returns to the heart to start its round trip through the body once more.

You have now had revealed to you some of the inner workings of the human body. You have learned how the organs perform in harmony with one another to produce and maintain a healthy body. And by now you realize that this is true of all human beings, including you.

At this very instant, your heart is beating, your blood is circulating, your food is digesting, and your glands are dispatching the hormones so that everything is working in order. Your eyes and ears are receiving and sending signals, and your brain is busy receiving these messages, storing up impressions and creating ideas. It is not hard to understand, is it, why this statement has often been made: "Of all wonders, the human body is the most wonderful of all."

Experiment:   Digestion of milk

Supplies needed:
    1 c. milk (8 oz.)
    1 oz. - of a one-tenth normal solution of hydrochloric acid (HCl) (can be purchased from a druggist.)
    25¢ worth of dry pepsin (can be purchased from a druggist.)

Procedure:
    Dissolve 2 t. of dry pepsin in 2 T. water.
    Add 1 T. of hydrochloric acid and pepsin mixture to 1 c. of milk.
    Let mixture stand at room temperature (1 to 3 hours).

Results:
    Milk should form a soft curd.
    It should give off an odor that resembles a "meaty" odor.

PHYSICAL FITNESS TEST


Test taken from:   American Association for Health Physical Education and Recreation
                   Youth Fitness Test Manual
                   1201 16th St., N. W.
                   Washington, D. C.   20036
                   1965 Edition



Scores are based on the 50 percentile, which means 50 percent of the youths taking the test nationally were below the score given and 50 percent were above the given score.

APPENDIX H

MAKING A COLLAGE

Materials needed:
    Large sheets of construction paper or cardboard.
    Paste
    Scissors
    Magazines of all kinds.

Directions:
    The collage can be assembled and pasted on large sheets of construction paper or cardboard using
    pictures and other cutouts from magazines.  Other materials and lightweight objects can be added
    if they are significant in describing personality traits of the pupil.

    In order for a collage to describe a personality, each fragment should tell something about the
    pupil.  The assembled collage should reflect the unique personality of the pupil.  A collage
    is an abstraction.  In this case, the collage is an abstraction which represents an individual's
    concept of his personality.

Suggestions for filling out transparencies on Mental Health.

Transparency I

| Mentally healthy people usually feel comfortable with themselves. (emotional health) | Mentally healthy people feel kindly about other people. (social health) | Mentally healthy people are able to meet the physical demands of life. (physical health) |
|---|---|---|
| 1. They try to understand their own feelings and behavior and use this knowledge to help work out their problems.<br>2. They realize they are not alone in their feelings, that everyone has problems, makes mistakes, and feels unhappy at times.<br>3. They set goals for themselves that they can hope to reach and are realistic about their strong points and weak points.<br>4. They can take life's disappointments in stride.<br>5. They have self-respect.<br>6. They find enjoyment in many of the things they do. | 1. They are able to give love and to consider the interests of others.<br>2. They have personal relationships that are satisfying and lasting.<br>3. They expect to like and trust others and usually expect that others will like them.<br>4. They make an effort to understand the viewpoints of others and to treat others as they would like to be treated.<br>5. They do not push people around, nor do they allow themselves to be pushed around.<br>6. They feel a sense of responsibility to their neighbors and fellowmen. | 1. They do something about their problems as they arise.<br>2. They accept their responsibilities.<br>3. They plan ahead and do not fear the future.<br>4. They welcome new experiences and new ideas.<br>5. They make use of their natural capabilities.<br>6. They set realistic goals for themselves.<br>7. They use their minds for constructive purposes. They have many interests. |

APPENDIX G

EXAMPLES OF STUDENTS' MATERIALS

Name_____

QUESTION SHEET

The Care of the Skeleton

Write the answers to the following questions from the reading "The Care of the Skeleton", pages 174-176 in textbook "Health".

1.  What are the food nutrients needed to build strong bones?

2.  How can you make sure that your bones will grow strong and healthy?

3.  How much milk should you drink each day?

4.  Why should you not pull a chair out from under someone who is just about to sit down?

## EXERCISE

As you grow and change, you sometimes, without even realizing it, set new goals for yourself. Perhaps you want to make new friends, to take part in competitive sports, to handle better your strong emotions such as anger, or to improve your appearance. Exercise, as you will discover, can play a part in helping you achieve such goals. It can also increase your general sense of well-being.

Regular exercise is needed each day, preferably out of doors, to help your body develop as it should during this period when you are growing so rapidly. Also, exercise often helps you feel better and gives you a sense of well-being.

Of course, exercise needs to be regulated according to your own requirements. Your doctor may advise you to limit your activity. Even so, you can usually have a daily walk.

How much exercise you need is an individual matter. A good general guide is that you should feel better, not worse, shortly after the exercise and also several hours later.

You have no doubt exercised too violently or too long if any of these conditions exist: if breathlessness and pounding of the heart are still noticeable ten minutes after exercise; if you feel exhausted, weak or shaky after a rest period of several hours; or if you have trouble getting to sleep that night and feel unduly tired the next day. In such cases, you should exercise less and for a shorter period the next time.

On the other hand, if you exercise enough each day to make you pleasantly tired but not exhausted, you develop strength, skill, and endurance. What happens to make these things possible? Your muscles, your heart, and other parts of your body grow stronger and more

efficient as a result of being called upon regularly for the effort required in exercise.

When you use your muscles in regular exercise, you soon begin to discover unexpected strength in them. They begin to feel firmer to the touch. They may even increase somewhat in size. From this you might think that your muscles are enlarging because the number of cells in the muscles is increasing. This is not the case. Your muscles enlarge because the individual cells making up the muscles become larger. The tiny threadlike fibers grow thicker and stronger as a result of being used regularly.

Another thing that happens as a result of regular exercise is that you move more easily and gracefully. Your central nervous system "learns" the proper responses as a result of your repeated efforts; and the coordination, or teamwork, between your nerves and muscles improves. As a result, you become more skillful and waste less energy in using your muscles.

Changes occur, too, in your circulatory system and in your respiratory system as a result of regular exercise that make it possible for you to exercise more strenuously with less fatigue. In the long run, these changes help your body work more smoothly and efficiently, not just when you exercise but at other times as well.

After a period of strenuous exercise you will find yourself beginning to get tired. This is your body's way of telling you that you need to stop and rest. When you engage in hard activity over a fairly long period of time, waste products, such as carbon dioxide, accumulate in your body faster than they can be removed. The muscles then do not function as well, and you begin to feel tired.

If you keep on exercising until you are exhausted, these waste products may accumulate in the muscles to such an extent that you may feel tired for a day or so. Eventually, you get over this kind of fatigue, usually with no lasting ill effects.

Exercise is a contributing factor to good posture. Taking part in a variety of different physical activities can help develop strong muscles in the shoulders, back, abdomen, arms, and legs. These muscles, in turn, help you assume good posture without your having to be constantly thinking about it or having to be reminded of it.

Name_____

## QUESTION SHEET

### EXERCISE

Write the answers to the following questions from the reading on "Exercise".

1. Do you really need exercise?

2. How much exercise do you need?

3. How does exercise affect your muscles?

4. What makes you get tired?

5. Can exercise help improve posture?

## PHYSICAL FITNESS TEST

Name_____ Date_____

Age_____ Sex_____

Height_____ Weight_____

| Event | Score | 50 percentile score |
|---|---|---|
| Pull-ups or flexed-arm hangs | | 50 pull ups for boys<br>or<br>6 flexed-arm hangs<br>for girls |
| Sit-ups | | girls 32 sit-ups<br>or<br>boys 50 sit-ups |
| Shuttle run | | girls 11.6 seconds<br>or<br>boys 11.0 seconds |
| Standing broad jump | | girls 5 feet<br>or<br>boys 5 feet 6 inches |
| 50-yard dash | | girls 8.2 seconds<br>or<br>boys 7.6 seconds |
| Softball throw for distance | | girls 64 feet<br>or<br>boys 120 feet |
| 600 yard run-walk | | girls 2 minutes 49<br>seconds<br>or<br>boys 2 minutes 21<br>seconds |

Name_____

## GOOD GROOMING CHART

| | Take a good look at yourself. If this column describes you, give yourself ......5 | When you seem to fit into this category, give yourself ...................3 | You're falling down in your grooming routine if this describes you, give yourself ...........1 |
|---|---|---|---|
| General Appearance | Alert, full of energy, eyes bright. | A bit tired, look bored, feel hungry, dread going from place to place. | Listless, droopy, feet drag, circles under eyes. |
| Standing Posture | Stand erect. | Tend to slouch and lean against anything handy. | Rubber legs and sway or curved back; shoulders sag. |
| Sitting Posture | Erect, sit well back in chair, feet on floor. | Slump forward, feet curled under or around anything handy. | Pronounced slouch. |
| Hands | Hands clean, nails clean and trim. | Dirty or stained hands either untrimmed or dirty. | Hands dirty and stained, very soiled nails; bitten, broken or untrimmed nails. |
| Hair | Clean, glossy and shining; arranged attractively. | Oily; needs a shampoo, should be combed; rearranging would help. | Dull and straggly; careless arrangement has that combed with an egg beater look. |
| Face | Really clean and clear, free from blemishes. | Needs washing; some blemishes. | Oily, blemished look. |
| Neck and Ears | Really clean. | Needs washing. | Could stand a thorough scrubbing. |
| Teeth | Clean white, no cavities; no "bad breath". | Teeth need brushing, should see dentist about cavities. | Badly stained or damaged; unpleasant breath. |

GOOD GROOMING CHART   Page 2

| Clothes | Clean, pressed, need no repairs. | Mussed or dirty; button missing or minor repair needed. | Soiled and badly wrinkled; needs mending; safety pins instead of buttons. |
|---|---|---|---|
| Color and style of clothes | Color matched: design becoming, appropriate for school, feels comfortable, fits right. | Colors do not go together; too dressy for school, flashy; too tight, wish you could change. | Too fussy, unsuitable for school; color and design haphazard; feel self-conscious. |
| Shoes | Comfortable heels; shining; match rest of costume. | Scuffed and need a good polish; no heels or heels too high (for girls); shoe laces need attention (boys). | In bad way; could use heels, soles, a good shine; careless walking habit causes excessive wear and tear. |

| If you score: | 45 to 50 | You are a "Cutie You". Your grooming is tops; keep up the good work. |
|---|---|---|
| | 40 to 45 | Your name is "Nearly Neat You". With attention to a few minor details you could become a "Cutie You". |
| | 30 to 40 | "Sloppy You" should be your name. You should check the weak spots which drag your score down. Develop a plan for taking care of these distractions. |
| | 20 to 30 | Shame on you! You are a "Repulsive You". You need to have a grooming schedule. Start by fixing one major item each day and in no time you"ll be in the top class. Don't be afriad to ask for help. Your key thought should be; "Plan a definite time for your grooming routines and stick to it". |

Name _____

## POSTURE ANALYSIS

Posture is the position you assume while sitting, standing, or moving about.

A good standing posture assumes that the various body segments, the head, neck, chest, and pelvis are in good alignment, one above the other, supported on the long bones of the legs with the body weight evenly dispersed through the arch of the foot to the ball, outside border, and heel of the foot.  Check the good and poor postural characteristics.

Good Posture - Side view

_____ Head balanced on neck above shoulders.
_____ Shoulders reasonably back, chest lifted.
_____ Abdomen reasonably flat, no exaggeration of normal lower curve of back as well as existence of a normal lower back curve.
_____ Pelvis in good alignment and balanced.
_____ Legs straight at knees.
_____ Body weight evenly distributed on the ball, outside border, and heel of the foot.

Poor Posture - Side view

_____ Head and neck extended too far forward.
_____ Shoulders pulled forward and downward.
_____ Protruding abdomen.
_____ Exaggerated curve of lower back or lack of normal curve.
_____ The front and top of the pelvis tilted down and forward.
_____ Knees slightly bent or slightly over extended.
_____ Weight unevenly distributed over the foot.

Good Posture - Front view

_____ Head held straight.
_____ Shoulders level.
_____ Hips (upper border) level.
_____ Legs in good alignment.
_____ Feet, with weight evenly distributed between the two feet.

Poor Posture - Front view

_____ Head held to one side.
_____ One shoulder considerably lower than the other.
_____ One hip (upper border) higher than the other.
_____ Legs in poor alignment, bow legs, etc.
_____ Feet turned outward or inward too much and weight unevenly distributed between them.

After your teacher has helped you analyze your posture your physical education teacher will recommend postural correction exercises.

Learning to Manage Our Emotions Wisely

When you asked about whether or not we should try to hide our emotions, I think you must have had unpleasant emotions in mind. You really would not want people to hide their pleasant feelings, would you?

Just think what the world would be like if no one ever looked happy or proud or excited!

And think how you would feel if your parents looked at you with blank faces -- and tried not to show the love they feel for you.

You would not like it, either, if your friends did not have a smile for you -- and did not show by their facial expressions that they really like you.

All of us need to know that there are people like our parents who love us and that we have friends who like us. But we would have a hard time knowing how people feel about us if they never showed their emotions.

Now perhaps you are thinking, 'Well, maybe the thing to do is to show our pleasant emotions and try to hide the unpleasant ones.' I wonder, though, if that would be a good thing to do at all times and in all situations.

Suppose you should see someone mistreating a dog or cat -- or a bully hurting a small child or destroying one of his playthings. Don't you think you would have a right to show anger at such times? It is perfectly natural for people to be angry at cruelty or unkindness or destructiveness. If no one ever became angry, such things might never be stopped.

It is quite natural, too, to get angry when you can't do something your friends are planning to do -- or when you feel you are being

treated unfairly or left out of things.

For many reasons, boys and girls get angry more often at their parents and brothers and sisters than at any other people or things. Because they love them most, they are most sensitive about them.

Because we all do get angry now and then, we need to learn ways of dealing with strong emotions such as anger -- ways that keep us from hurting others or ourselves.

For example, when you have angry feelings that stay with you for awhile, it is better to let them out than it is to keep these feelings inside you. For as the feelings are inside you, you will feel mean and unhappy. And such feelings can keep your body from working properly.

Then, too, you cannot really hide your mean or angry feelings.

Sooner or later these feelings come out disguised in other ways. Angry feelings come out in such ways as teasing or bullying smaller children or animals; you are just getting rid of anger you feel toward someone else. Anger of this kind is sometimes called displaced anger.

Or the angry feelings you try to keep bottled up inside you may come out in ways that hurt yourself. You may find that your head aches or your stomach hurts at times when you feel very cross and mean inside.

And so for these reasons, too, you should try to let out the angry feelings by 'talking them out' when possible.

If there is no one around with whom you can talk over your angry feelings, instead of having a temper tantrum or lashing out at someone who has provoked you, try to hold off for a while. Do something. Take a long walk, clean your room thoroughly. Such activity helps you through the angry period until you have a chance to talk out your feelings.

Perhaps some mention should also be made of hurt feelings. Often we get angry at people or are hurt by them because we do not try to understand what they meant by what they did or said -- or why they are acting as they are.

Suppose, for example, a friend seems grumpy or not very talkative one day. This may make you angry or may hurt your feelings. Such hurt feelings can often be avoided if you will be a little more understanding -- and more willing to think about why he may be acting as he is. Perhaps he is worried about something. Maybe something has gone wrong at home. Instead of getting angry or feeling hurt, you might ask in a friendly fashion if anything is wrong. Or you might just overlook for the moment behavior that is wrong. Or you might just overlook for the moment behavior that is not typical.

Or suppose a newcomer at school seems unfriendly to you. Instead of reacting by getting angry or feeling hurt, you might stop to consider why he may be acting this way. Maybe he is shy and unsure of how to make friends. Perhaps he has in times past been badly treated by others -- and is afraid you are going to treat him badly, too. A little extra friendliness on your part may be just what he needs.

You must remember that emotions are wonderful things. The world would be very dull and uninteresting without them. Without feelings we would all be as blank as puppets. Instead of hiding our feelings, most of us need to show our pleasant feelings more often. Then others will be certain that we like them and that we appreciate them.

As for our unpleasant feelings, we need to learn to control how we act about them so that these feelings will not cause us to hurt others, to damage or destroy property, or to hurt ourselves.

Name_____

## WHAT IS YOUR PERSONALITY RATING?

Check your personality traits in the chart below.  Place a $(\sqrt{})$ in the

blank in front of the question if the answer is yes.

_____ 1.  Do you present a well-groomed appearance?

_____ 2.  Do you have a good posture?

_____ 3.  Is your facial expression pleasant?

_____ 4.  Is your skin clean and radiant?

_____ 5.  Is your hair clean and combed?

_____ 6.  Are your clothes neat and clean?

_____ 7.  Are you usually cheerful?

_____ 8.  Do you enjoy being with classmates?

_____ 9.  Do you remember to extend little courtesies?

_____ 10.  Are you patient with people?

_____ 11.  Can you make other people feel at ease?

_____ 12.  Do you show appreciation for what others do for you?

_____ 13.  Do you greet your family with a cheerful "Good Morning"?

_____ 14.  Do people respect your judgment?

_____ 15.  Can you sympathize with the problems of others?

_____ 16.  Can people depend on you to do things ;you say you will?

_____ 17.  Can you take criticism good-naturedly?

_____ 18.  Have you confidence in yourself?

_____ 19.  Do you have a good attitude toward school?

_____ 20.  Do you complete jobs you start?

_____ 21.  Can you work with others?

_____ 22.  Do you show interest in things you do?

_____ 23.  Do you control your temper?

_____ 24. Do you adjust to new situations?

_____ 25. Do you mean what you say?

_____ 26. Are you honest with others?

_____ 27. Are you unselfish?

_____ 28. Do you have a sense of humor?

_____ 29. Can you keep a secret?

_____ 30. Do you control habits, such as biting your nails?

_____ 31. Is your voice pleasing?

_____ 32. Do you use good English when you talk?

_____ 33. Can you carry on a conversation with friends?

_____ 34. Can you talk about other things than yourself?

_____ 35. Do you listen to others when they talk?

_____ 36. Do you keep from gossiping?

_____ 37. Do you like most people you meet?

_____ 38. Do you keep from talking when you have food in your mouth?

_____ 39. Are you neat in your school work and papers?

_____ 40. Do you have some hobbies, such as collections or scrapbooks?

_____ 41. Have you a favorite sport which you play, such as tennis, swimming, baseball, or golf?

_____ 42. Do you enjoy good radio programs?

_____ 43. Do you enjoy good television programs?

_____ 44. Do you enjoy watching games such as football, basketball, or tennis?

_____ 45. Do you enjoy being outside?

_____ 46. Do you enjoy doing things for others?

_____ 47. Do you enjoy doing things with others?

Add up the number of (√) you have and your teacher will help you learn what your score means.

Name_____

## SOCIAL MATURITY

Directions:
In answering the following questions, be very careful to describe your own behavior as accurately as possible. Read the three or four statements under each number and check the one that is most true of you.

1. A._____ I do not know how to make my own breakfast.
   B._____ I think I know how to make my own breakfast, but I have never made my own breakfast.
   C._____ I sometimes make my own breakfast, but never make breakfast for others in my family.
   D._____ I sometimes make breakfast for myself and others.

2. A._____ I get along well with my family.
   B._____ I sometimes have trouble getting along with my family.
   C._____ I have trouble getting along with only one person in my family.
   D._____ I have trouble getting along with everybody in my family.

3. A._____ I like all my teachers.
   B._____ I like most of my teachers.
   C._____ I dislike most of my teachers.
   D._____ I dislike all of my teachers.

4. A._____ I know very few of the people in my classes.
   B._____ I know most of the people in my classes.
   C._____ I know hardly any of the people in my classes.
   D._____ I know all of the people in my classes.

5. A._____ I would not want a foreigner to move next door to me.
   B._____ I would not mind if a foreigner moved next door to me.
   C._____ I would dislike very much to have any kind of foreigner move next door to me.
   D._____ I would like to have a foreigner move next door to me.

6. A._____ I help clean house regularly.
   B._____ I sometimes help clean house.
   C._____ I never help clean house.
   D._____ I clean my own room, but no others.

7. A._____ I am never late to school.
   B._____ I am sometimes late to school.
   C._____ I am late to school often.

8. A._____ I sometimes feel life isn't worth living.
   B._____ I always feel life isn't worth living.
   C._____ I think life is neither good nor bad, just somewhere in between.
   D._____ I think life is a happy and exciting adventure.

9. A._____ I enjoy talking before a class or meeting.
   B._____ I hate to talk before a class or meeting because I feel very embarrassed.
   C._____ I don't mind talking before a class or meeting, but I would rather not have to do it.

10. A._____ I think I am very popular.
   B._____ I am about as popular as the average person I know.
   C._____ I am not as popular as the average person I know.

11. A._____ I frequently try to do creative work (such as writing fiction, painting, composing, etc.)
   B._____ I occasionally try to do creative work.
   C._____ I never try to do creative work.

12. A._____ I play group games regularly.
   B._____ I play group games now and then.
   C._____ I seldom participate in group games.

13. A._____ I can't stand to be alone very long.
   B._____ I like to be alone, the more the better.
   C._____ I like to be alone sometimes.

14. A._____ I like to go to school.
   B._____ Going to school is all right, but nothing to rave about.
   C._____ I hate to go to school.

15. A._____ Things upset me frequently.
   B._____ Things upset me occasionally.
   C._____ Things rarely upset me.

16. A._____ I daydream a great deal.
   B._____ I daydream once in a while.
   C._____ I never daydream.

17. A._____ I read or listen to the news regularly.
   B._____ I read or listen to the news once in a while.
   C._____ I hardly ever read or listen to the news.

18. A._____ I make new friends readily.
   B._____ I make a new friend once in a while.
   C._____ I hardly ever make a new friend.

19. A._____ It makes me very jealous to see others win prizes or honors in my school.
   B._____ It makes me only a little jealous to see others win prizes or honors in my school.
   C._____ I like to see others win prizes or win honors in my school.

20. A._____ I always offer my seat to old or crippled people.
   B._____ I sometimes offer my seat to old or crippled people.
   C._____ I seldom offer my seat to old or crippled people.

21. A._____ I trust very few people.
    B._____ I trust most of the people I know.
    C._____ I trust almost all the people I know.

22. A._____ I think the most important thing in life is to be happy.
    B._____ I think the most important thing in life is to help others.
    C._____ I think the most important thing in life is to earn a lot
             of money, because most things worth having can be bought.

23. A._____ I laugh or make fun of people who are different from me.
    B._____ I do not laugh at different people, but I don't like them.
    C._____ I am always kind to people who are different from me.

## WHAT IS MENTAL HEALTH?

Mental health has to do with the ways people think, feel, and act in their families, at school, at play, on a job, and in the community.

One way of gaining more understanding of mental health is to think about the traits of mentally healthy people. Of course, just knowing what good mental health is does not mean you automatically achieve it, but knowing can help you think straight about it. Mentally healthy people have sometimes been described as follows:

1. They generally feel comfortable with themselves. (emotionally healthy)

2. They feel kindly about other people. (socially healthy)

3. They are able to meet the demands of life. (physically healthy)

Mental health is not something that is finished and done for at any given period or stage of life. It can always be improved. All through life an individual can keep working toward the goal of better mental health.

As you grow in your understanding of what makes you think, and feel, and act as you do and as you learn ways of managing your everyday problems, you are being helped toward good mental health. Having problems does not keep you from being mentally healthy. It is the way you face up to your problems that is important. Often it is useful to talk over with your parents, or others who may help, the problems that trouble you and the upset feelings that go with these problems.

Sometimes it is useful to talk over with classmates at school a problem that is common to many in the class. For example, there is the problem of how to handle mistakes and failures. Some students feel completely discouraged when they fail to pass a test. Some feel ashamed

and some try to pretend they have not really failed. But others try to learn from their mistakes.

In talking over this problem of handling mistakes and failures, the group may be able to make some helpful suggestions. In handling mistakes and failures, it helps to remember that we all make mistakes now and then, and we will have some failures. But we can learn from our mistakes, if we will; then we are not so likely to make the same mistakes again. We should remember, too, that it is no disgrace to fail or to make errors if we have tried our best. It is far better to be willing to go ahead and try things than it is to hang back or give up because we are afriad of making mistakes.

Blaming others for our own mistakes may be temptation at times, but it is not really helpful. It is far better to face the fact that we have made errors and see what we can do to avoid making the same errors again.

Of course it is natural that we have emotional feelings, we may feel a little foolish, or even a little angry, when we make mistakes. But it is not good to keep on feeling that way over a long period of time. As with other upset feelings, it can generally help if we will take the responsibility of talking over our mistakes or failures with parents or others we trust.

Our mental health as well as our social health is important in understanding differences in people. Understanding of others can be handled by taking a matter-of-fact view of outward differences in others, such as their dress or speech. Then we do not emphasize the differences. Actually, each of us is different from every other individual. And it is these differences among people, whether it be

differences in language, in religion, in appearance, or in any other way, that make all our lives more interesting.

The basic key to understanding others and being sensitive to their needs is a simple one. It requires merely that we try to put ourselves in the other person's place and ask ourselves from time to time "How would I feel if I were in his place? What would I want others to do to help a little?"

No one has ever thought of a more useful guide for helping create good human relations than kindliness, trying to treat others as we ourselves like to be treated.

APPENDIX H

CORRESPONDENCE TO CURRICULUM SPECIALISTS

# Oklahoma City Public Schools
### 900 North Klein
### Oklahoma City, Oklahoma 73106

**DEPARTMENT OF CURRICULUM**                    February 15, 1972

Dear

As a part of my research study in Oklahoma City Public Schools we are
presently developing a curriculum interrelating Home Economics and
Physical Education at the sixth grade level for Rogers Middle School.

We hope to implement the curriculum beginning March 28, 1972, but would
like to submit it to you for your opinion and suggestions. The curric-
ulum is being developed by a team of Home Economics and Physical Educa-
tion teachers. It is a nine weeks program which is health-oriented
with emphasis on physical, emotional, social and mental health.

I know that this is a busy time for you and I apologize for adding to
your list of work. However, I will sincerely appreciate your help as
I know it will strengthen our curriculum and my study.

Please let me know if you can fit this into your schedule. I will have
the curriculum to you by March 9, 1972 and would appreciate its return
by March 17, 1972. This will give us a little time to incorporate your
suggestions into the course before its implementation. Thank you very
much for your time.

                                        Sincerely,


                                        (Mrs.) Virginia Lamb
                                        Home Economics Consultant


VL:b

Enclosure:

_____ I will be able to review the curriculum.


_____ I will not be able to review the curriculum.


Signed_____

**Oklahoma City Public Schools**
900 North Klein
Oklahoma City, Oklahoma 73106

DEPARTMENT OF CURRICULUM

March 8, 1972

Dear

In February I contacted you by mail for your help on a curriculum, which is being developed as a part of my research study in the Oklahoma City Public Schools.

Enclosed please find the curriculum which I am submitting to you for your opinion and suggestions. If possible I would like the curriculum returned by March 17, 1972.

Please feel free to write your comments directly on the copies which are enclosed.

I appreciate your taking time to look over these materials and am looking forward to your suggestions.

Sincerely,


(Mrs.) Virginia Lamb
Home Economics Consultant

VL:b

APPENDIX I

REVISED PHYSICAL FITNESS TEST

PHYSICAL FITNESS TEST

Name_____  Date_____

Age_____  Sex_____

| Event | First score | Second score |
|---|---|---|
| Boys:  Pull-ups (as many as can do)<br>Girls:  Flexed-arm hangs (timed) | | |
| Sit-ups -- hook line<br>(as many as can do) | | |
| Standing broad jump (measured) | | |
| 50-yard dash (timed) | | |
| 100-yard dash (timed) | | |

APPENDIX J

TEACHERS' LOG

TEACHER'S LOG FOR 6th GRADE MIDDLE SCHOOL UNIT
INTERRELATING HOME ECONOMICS AND
PHYSICAL EDUCATION


Name _____    Date _____


Behavioral objective:   #25

    The student will be able to demonstrate an understanding of his
social maturity by participating in a social maturity test.


Learning experience or experiences used:


Did the learning experience or experiences meet the behavioral
objective?   (Give evidence)


Learning experiences added:


Learning experience omitted:   (Give reason for omitting)

Resources used:   (Were these sufficient?)

Evaluation used:   (Did the evaluation give evidence that the objective had or had not been met?   Explain.)

Was time allotment sufficient?   (If more time was needed, how much?   If less time would be needed, how much?)

Comments that you believe would make the type of interrelating (home economics and physical education) an advantage in reaching this objective.

Additional Comments:

VITA

Virginia Malzahn Lamb

Candidate for the Degree of

Doctor of Education

Thesis: INTERRELATING SELECTED ASPECTS OF HOME ECONOMICS AND PHYSICAL
EDUCATION FOR A HEALTH PROGRAM IN THE MIDDLE SCHOOL AT THE
SIXTH GRADE LEVEL

Major Field: Home Economics Education

Biographical:

Personal Data: Born in Perry, Oklahoma, February 1, 1923, the
daughter of Mr. and Mrs. Charles F. Malzahn

Education: Received the Bachelor of Science degree from Oklahoma
State University in Food and Nutrition in May, 1944; completed
a Dietetic Internship at the University of Washington in
September, 1945; received a Master of Science degree from
Oklahoma State University in August, 1959, with a major in
Home Economics Education; completed the requirements for the
Doctor of Education degree at Oklahoma State University in
July, 1972, with a major in Home Economics Education.

Professional Experience: Dietitian at the University of Washington
Cooperative 1945-1946; Second grade teacher in Perry Public
Schools 1947-1948; Dietitian for Perry Public Schools 1948-
1950; Dietitian 1950-1955; Trades and Industrial Foods teacher
1956-1958; Home Economics teacher 1958-1966, and Consultant of
Home Economics 1966-1972 for the Oklahoma City Public School
System; Curriculum Specialist for the State Department of
Vocational and Technical Education, Oklahoma, spring and
summer, 1971.

Professional Organizations: Oklahoma and American Home Economics
Associations; Oklahoma and National Education Associations;
Association of Supervision and Curriculum Development; American
Association of University Women; Omicron Nu, Phi Upsilon
Omicron, and The Delta Kappa Gamma Society.