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ABSTRACT

This document describes two models for an early school health curriculum project. These two projects were initiated with the aim of increasing effective cooperation of public health personnel work with public schools in teaching health maintenance and prevention of disease. The Berkeley Project worked with students of grade three through grade seven. The Seattle Project worked with students from kindergarten through third grade. The unit approach to curriculum was used. Each unit studied dealt with specific aspects of the human body. Intensive preparation for the teaching of these units was given to the teachers involved. Team training with teachers from different schools, principals, school nurses, health educators, or curriculum specialists included workshops, visiting other schools, and exchange of ideas. The emphasis was placed on the personal reaction and understanding of each individual being trained for the project. Carefully selected materials were made available, including books, films, models, listening post, and audio-tape materials. To gain financial and administrative support, teams of two teachers at the same grade level introduced the health project into the ongoing school curriculum. The project has been evaluated as feasible, and the involvement of the American Lung Association is considered critically important. Included in this document are curriculum outlines for both the Seattle and Berkeley Projects. (JD)

THE BUREAU OF HEALTH EDUCATION'S

ELEMENTARY SCHOOL HEALTH CURRICULUM PROJECT

BERKELEY MODEL

--- AND THE ---

AMERICAN LUNG ASSOCIATION - BUREAU OF HEALTH EDUCATION'S

PRIMARY GRADES HEALTH CURRICULUM PROJECT

SEATTLE MODEL

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THE SCHOOL HEALTH CURRICULUM PROJECT*

BERKELEY MODEL

It began in 1967 with two questions: How can Public Health personnel work more effectively with educational institutions--particularly public schools--to increase their sensitivity to and active assumption of responsibility for teaching health maintenance and prevention of disease? And: How can the Federal Government help speed up the process for better health education? On these questions, the School Health Curriculum Project was built.

The National Clearinghouse for Smoking and Health, then a program of the PHS Division of Chronic Disease, raised these questions because of its concern for the growing number of youth who were beginning to smoke at a younger age, and the impact of such behavior on premature death and disability. It was a clear example of personal decision-making on which effective primary prevention education could make substantial impact.

The project is now based in the Bureau of Health Education, Center for Disease Control, Atlanta. Since 1970, the project's broad-based elementary and junior high school health education curriculum, intensive teacher training, and extensive classroom teaching resources have been introduced to 28 States. Most school districts involved have made substantial progress in developing their own curriculum model, have extended training to other teachers, and have established a base of administrative, general curriculum and community support that is essential to improvement of school health education.

Underlying Principles and Strategies

With the project's 1969 launching in San Ramon, California, several basic principles were in place: Education about smoking and other categorical concerns should not be approached as isolated subject matter, but should be part of a comprehensive approach to learning about effective living, including health. In effect, health education should be compatible with other traditional curriculum areas, and should contribute to their goals as well as be facilitated by their contribution to general life experience, understanding, and skill.

The curriculum should not only stimulate student awareness of positive health concepts in an exciting and pertinent way, but also should help them to learn and to assume responsibility for making sound decisions about matters affecting personal and community health. Priority health issues should be emphasized rather than a potpourri of topics.

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*Based on material excerpted from a published report in the February 1976 issue of FOCAL POINTS, published by the Bureau of Health Education. Persons wishing further information about the School Health Curriculum Project or on the project direction of localities for site visits should contact: Roy L. Davis, Director, Community Program Development Division, Bureau of Health Education, Center for Disease Control, Atlanta, GA 30333.

Teacher training--based on the curriculum model--is essential. Simultaneously, strategies should be developed to assure that well-trained teachers are supported by well-oriented administrators and other curriculum specialists. A wide variety of carefully selected classroom teaching methods and resources--material and human--should be immediately available from the school and community.

Schools alone cannot be expected to accomplish the total task of helping youth to make more healthful decisions. Parents, other adults--including health workers--and community health organizations should be involved to reinforce curriculum objectives to the greatest extent possible. There should be a practical and inexpensive way to introduce and implement the project in a school district. Finally, there should be built-in measures of accountability and evaluation.

Project Diffusion and Expansion

By 1970, the underlying principles, basic curriculum elements, and strategies to effect change in school health education were defined and tested. Then, the project was introduced in 10 other school districts around the nation. This three-year effort was carried out under contract, and ultimately led to spread of the model to many more communities. Currently it is in operation in over 200 school districts.

The original curriculum was designed for children in the fifth through seventh grades (10-12 years old). A fourth grade unit was introduced in 1975, and a third grade unit in 1976. Units for kindergarten through the second grade will be completed in the future.

THE UNIT APPROACH TO CURRICULUM

Much of the strength of the School Health Curriculum Project comes from the comprehensive, in-depth approach and content of the grade level units. Each is built on a basic philosophy of education and health. While each unit has specific objectives, the overall goals deal essentially with: Self-enhancement for every child . . . Appreciation of the human body . . . An understanding of how it interacts with the environment and daily practices of the individual . . . . Knowledge of body systems and functions in order to understand health maintenance and disease and better equip the student to make his own decisions . . . Pupil interaction for peer teaching and stimulation of critical thinking . . . Contemporary priority community health problems . . . and interaction with people in the community who are also concerned with health.

Each grade unit extends over eight to 10 weeks' time and is organized around the structure, functioning, interactions, and care of a body system: Energy, nutrition, and the digestive system in the fourth grade . . . Lungs and the respiratory system in the fifth . . . Heart and the circulatory system in the sixth grade . . . and the brain and nervous system in the seventh. Each unit follows the same pattern of phases: An introduction to pique curiosity, acquaint pupils with the methods, and assure that they know the importance of the study to be undertaken . . . An overview of body systems and their relationships to the function of the whole being . . . Structure and functions

of the particular system under study . . . Diseases and conditions to which the system is subject . . . What the individual, community, and society can do to prevent problems . . . and a "culmination" phase that reviews and gives the students opportunity to realign their thinking and share with parents and others what they have learned.

DISTINCTIVE CHARACTERISTICS OF THE PROJECT

Team Training

Several project characteristics may provide insight into how it differs from more traditional approaches to school health education. The first deals with teacher training. Before even one student is involved, teachers who will work in the project participate in an intensive 60-hour training workshop. Training involves more than just classroom teachers; each school sends a team that includes two teachers, their principal, and one or two support staff, such as school nurses, health educators, or curriculum specialists.

During training, this team goes through all the phases of their grade unit, experiencing the concepts, contents, methods, activities, equipment, and resources they will use in the classroom.

Team training does not end with the workshop. Each new project site is visited by training staff to monitor implementation, help with problems, and encourage the spread of teacher training in the local school system. A reconvening session is held about nine months after the training. Here, teachers share experiences in using the unit, ideas and problems, student response, parent and community involvement and plans for further implementation.

Project Teaching Methods

A second characteristic of the project that distinguishes it from many other approaches deals with teaching methods. Traditional approaches often rely heavily on didactic methods to impart information, and reinforce or replace these methods by written materials. In contrast, the School Health Curriculum Project uses practical, participative methods and tools for pupils and teachers alike. Further, the emphasis of the project is personal: It is on the individual learner's body and how it works, on his health and well-being, on things that can adversely affect him and his community, on his options, and on the choices he is responsible for making.

Teaching Resources

A third distinctive feature of the project deals with the immediate availability to the teacher of carefully selected and tested materials that relate to specific curriculum goals and objectives. These include: books, pamphlets, films and filmstrips, listening-post and audio tape materials, models, slikes, charts, description of pupil-prepared games and activities. Another set of materials provides specific instructions and examples of necessary resources for classroom procedures, individual and group projects. These resources pertain to major concepts, sequence of events, grouping arrangements and tasks, learning station materials, direction for work with community resources,

approaches to parent involvement, desk work materials, and pertinent health information.

Resources come from a wide variety of commercial, official, professional, and voluntary organizations. Each team-in-training receives a list of materials, sources, and approximate costs for their particular unit. The same materials can be used by many pupils in several classes over several years. Most of the items are well-known to educators, and some are already available in school systems. Districts must provide the materials to participate in the project.

Administrative and Financial Support

Another distinctive characteristic is the strategy for gaining initial support of school administration and general curriculum personnel, and for making most likely the project's long-range continuation through integration into the district's established education program. In carrying out this strategy, only teams of four or five persons are accepted for training. Each team must include two teachers of the same grade level, the administrator of the same school, and one or two curriculum support personnel.

Another strategy is to start small, relatively inexpensively, and at a slow pace. The project is introduced at a school through intensive effort and support to only four or five people, who then concentrate efforts in but two classrooms for the first year. This live model becomes the source of interest from which the project is extended. The first trainee team who develop the model is responsible for training others.

Materials obtained for the first team subsequently serve about eight additional classrooms a year. Thus, costs are not excessive and do not exceed those of other curriculum areas. Once the project is launched locally and the enthusiasm of pupils, teachers, parents, and outside groups demonstrated, continued support becomes easier. The project rarely involves employing new personnel, reorganizing administrative and supervisory staff relationships, finding large amounts of money, developing special facilities or resources, adding major areas to an overcrowded curriculum, disturbing plans of in-service training, or risking something controversial or overly categorical.

EVALUATION

From the beginning, accountability and evaluation have been recognized as important aspects of the project. Various measures have been undertaken to assess its impact on knowledge, attitudes, and practices of people involved--including pupils, teachers, administrators, and parents. A variety of instruments and approaches have been used at both the national and local level to gather information. Also, a number of doctoral dissertations have analyzed effectiveness of the methods used. All of these are beginning to indicate that the curriculum does have a positive impact on development of constructive knowledge, attitudes, and health behavior change.

Also striking on the positive side are: The steady growth of the project in new schools and communities based on local decisions and commitment after

careful study, review of materials, and site visits. Regularly collected anecdotal materials from trainees before training and after they work with the units in the classroom also indicate positive feelings about the model. Locally administered knowledge and attitude tests further indicate that pupils do "learn" about health matters.

The most sophisticated national study to date was conducted by Education and Public Affairs in Washington, D.C. A valuable by-product of this study is the insight it provides into difficulties of evaluating the remaining impact of classroom experiences on health behavior a number of years after the original experiences occur. Evaluation authorities agree, however, that this "Colmen Report" is a benchmark among evaluation endeavors applied to school health curriculum; and, also, that it points to solid constructive changes resulting from the curriculum experience.

The study followed up youngsters who were in the fifth, sixth, and seventh grades when the three original curriculum units were introduced. Measurements of those students--then in the ninth or tenth grades--and of a matched sample of "control" students were taken in five dimensions: Possession of health knowledge in areas related to the curriculum . . . Self-reported health behavior . . . Cigarette smoking behavior . . . Attitudes associated with cigarette smoking obtained from responses to an experimental version of the Teenage Self-Test on cigarette smoking . . . and self-reported school behavior and interests.

The findings show a substantial relationship between enrollment or non-enrollment in the curriculum two to five years earlier and present health knowledge as related to the curriculum, promising relationships to present general health behavior or to smoking, and little relationship either to school-related behavior or to scales on the Teenage Smoking Self-Test. The implications of this evaluation point to valuable effects of health education among school age children, particularly in ways that schools can impact, namely on knowledge and behavior. Clearly, more evaluation is needed, and such is currently underway.

Berkeley Model Grade Themes

While the overall curriculum deals with a study of the body, each unit involves a comprehensive health education approach, organized around a body system with stress on how individual behavior and interaction with the environment impacts on the body system.

- Grade 3 - Light and Vision
- Grade 4 - The Digestive System, Nutrition and Energy
- Grade 5 - The Lungs and Respiratory System
- Grade 6 - The Heart and Circulatory System
- Grade 7 - The Brain and Nervous System

LUNG ASSOCIATION INVOLVEMENT

It has been gratifying to see many lung associations actively supporting the project. Indeed, the enthusiastic support of lung associations for the Berkeley Project has made a real impact in helping it "fly" in many areas. Some of the ways this was done:

—Direct grants were made to school districts to provide for teacher training and resource materials used in the curriculum.

--Grants were solicited from outside sources to fund the beginning of the project.

--Meetings of interested agencies were initiated by and convened in lung association offices to discuss the project.

--Lung Association staff worked directly with state and local Boards of Education in behalf of the project.

--Resource people were provided for class sessions in the fifth grade unit on the respiratory system.

--Films and printed materials were provided for class use.

--Coordinated approaches involving other agencies were made to school authorities in behalf of improved comprehensive health education.

Persons wishing further information about the Elementary School Health Curriculum Project including the closest localities for site visits should contact the Project Director. Write Mr. Roy Davis, Director, Community Program Development Division, Bureau of Health Education, Center for Disease Control, 1600 Clifton Road, Atlanta, Georgia 30333.

THE PRIMARY GRADES HEALTH CURRICULUM PROJECT

SEATTLE MODEL

Four and one-half years after the first ALA Bulletin article on the "Berkeley Project," the July-August 1976 edition of the Bulletin carried news of a new project. The interest and concern of ALA in developing a child-oriented and broad based approach to smoking education led to the birth and development of the Primary Grades Health Curriculum Project--Seattle Model to be undertaken in cooperation with the Bureau of Health Education under Federal Contract. Negotiated in May 1975, the scope of work required development and testing of at least two and no more than four health education units for grades K-3. The contract for $37,650 subsequently led to a subcontract with the Seattle School District to implement the work. The first year's task involved writing and testing prototype units. A first class was taught by the teachers who wrote the units, and they in turn taught a second teacher to replicate and test the unit. The result was four units, one for each grade, Kindergarten through three.

Grade Level Emphases

Each of the Seattle units centers around a central theme (see attached outlines) e.g.:

Kindergarten - Happiness is Being Healthy (The Teeth)

Grade 1 - Super Me (The Senses)

Grade 2 - Sights and Sounds (The Eye and Ear)

Grade 3 - The Body--Its Framework and Movement

Each unit in turn breaks down into phases similar to those of the Berkeley model, e.g.:

Introduction

Phase I - Awareness

Phase II - Appreciation

Phase III - Structure and Function

Phase IV - Diseases and Problems

Phase V - Prevention and Care

Culmination Activities

Additional Testing and Development

In May 1976, ALA's contract was extended to proceed with final development and testing. The Seattle School District contract was continued. Four test sites outside of Seattle were subsequently selected for training and participation in final testing of the model. These districts, supported by contract funds, are located in El Cajon, California; Lee County, Florida; and Nassau County, Long Island; Seattle also added an additional district from that region. Teachers and curriculum specialists from these areas met for a one-week workshop conducted in Seattle August 16-20, 1976.

In the spring of 1977, the groups will meet again in Seattle to share experiences and prepare the final curriculum model. The ALA/Seattle model units will then be ready for replication in other areas. While the exact plan for this has not yet been developed, it will presumably be the primary thrust of the third year of the contract.

Evaluation Plan

When the original contract was signed with CDC in 1975, ALA agreed to conduct an evaluation of the new K-3 curriculum units using Christmas Seal Funds earmarked especially for this purpose. Dr. Richard Andrews of the University of Washington in Seattle was engaged in November 1975 to conduct the evaluation study.

METHOD AND DESIGN OF STUDY*

In order to conduct the study, three stages were necessary: (1) the design, development and refinement of instruments to measure attitude, social and knowledge gains of kindergarten, first, second and third grade children; (2) to conduct the evaluation within the selected schools in the Seattle School District; and (3) conduct a statistical analysis of the data obtained in the experiment.

Evaluation Materials Developed

This study utilized materials developed specifically for this project using previously developed School Health Curriculum Project instruments as a guide. The individual descriptions of these instruments is provided below.

Attitude Test

To measure attitudes toward smoking and good health, a test was developed which contains some 31 items. The Attitude Test is a group administered instrument in which primary school age children indicate their extent of agreement or disagreement by circling the appropriate answer on the instrument. All items are read to children in order to overcome the effects of reading ability on responses. This instrument was pre-tested and the original

*This description of method and design, as well as the conclusions (page 10) are excerpted from Evaluation Report: Seattle School Health Curriculum Project, by Richard L. Andrews, Ph.D., June 26, 1976.

version of 45 items was refined through psychometric methods to its final form.

Health Knowledge Test

Because the curriculum content for each of the primary grades is specific and new, new knowledge tests were required. Two distinct types of tests were developed depending on the grade level under consideration. However, each test was refined through the same psychometric methodology.

--Curriculum materials were reviewed for purposes of generating specific items.

--The original set of items was reviewed with the curriculum development staff and refined.

--The refined set of items was administered to groups of children in the school system.

--An item analysis was performed on these responses, and from this analysis the final instruments were developed.

Kindergarten and first grade tests were developed as picture identification tests. Second and third grade tests were developed as printed multiple choice and matching type questions.

Data Collection Procedures

All data collection instruments were administered in classroom settings during regular school hours. All instruments for a grade level control and experimental group were administered on the same day. All pre-tests were administered by the evaluation team without the classroom teacher present. Neither control nor experimental classroom teachers had access to the evaluation instruments during the course of the project.

These conditions were imposed by the evaluation team in order to test the impact of the curriculum without the results being confounded by the possibility that experimental teachers would teach toward the test or that control teachers would discuss the test with their students before the post-test was administered.

Further, all tests were read to students in order that the effects of reading ability would not become an intervening variable. All kindergarten attitude tests were administered to children individually in order that the abstraction of the task could be somewhat diminished.

Teachers were administered the Minnesota Teacher Attitude Inventory while the students were responding to the post-tests.

Parent surveys were sent home with children by classroom teachers and returned sealed closed.

Data Analysis

In order to test the effects of the Seattle Primary Grades Health Curriculum Project

on primary school children in selected schools, five dependent variables were identified. These variables were: (1) changes in children's attitude toward smoking and good health, (2) changes in knowledge about body systems, the effect of smoking and good health, (3) social network of classrooms, (4) teacher attitudes about teaching, and (5) reported changes in family health practices and smoking behavior.

Attitude Toward Smoking. For purposes of this [redacted]ttitudes toward smoking was defined as the individual raw score [redacted] the instrument developed for use in the study.

Knowledge of Body Systems, Smoking and Good Health. This dependent variable was operationalized to mean the raw score as determined by the aggregate number of correct responses on the paper and pencil tests developed from the curriculum materials for each grade level.

Social Network of the Classroom. Social network was defined as the informal communications structure existing in the classroom. A social network was considered to be more cohesive, efficient and effective when the number of itinerations needed to reach a 50% level of saturation was low, the total saturation with unlimited itinerations and number of opinion leaders was high and the number of classroom isolates was low. In order to provide a measure of social networks, data gathered from the sociometric questionnaires were used to generate a sociometric matrix and a sociometric analysis of the informal communications structure.

INITIAL SUMMARY AND FINDINGS.

The first year's work with the development of the evaluation design has produced some preliminary findings. The report indicates that the following impacts resulted from participation in the Primary Grades Health Education Curriculum Project:

1. Attitudes about smoking and good health of kindergarten, second and third grade children were affected by the independent variable;

2. Attitudes about smoking and good health of first grade children were not affected by the independent variable*;

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*The lack of a significant effect of the project of changes in first grade children's attitudes about good health and smoking seems to be accounted for in the initial differences between control and experimental groups at the pre-test state. These differences are due at least in part to the participation of the experimental group in the kindergarten phase of the curriculum project prior to pre-testing. A t-test on differences between the post-test of the experimental and control groups revealed a significant difference ($P < .05$) in favor of the experimental group. Thus, it appears that the overall impact of the project is to some extent masked for the first grade experimental group.

3. Knowledge about body systems, good health and smoking of kindergarten, first, second and third grade children was affected by the independent variable;

4. Social networks when described in terms of quantity of information exchanged: classes of second and third grade students were more effective and efficient as a result of their participation;

5. Social networks when described in terms of quality of information exchanged: classes of second and third grade students were more effective and efficient as a result of their participation;

6. Attitudes of teachers about teaching were not affected by their participation;

7. Reported impact on families of children who participated in the project suggests that to a major extent children's attitudes about good health improved and some smoking behavior changes occurred in parents.

The evaluation work is continuing during 1976-1977 and is now concentrating on testing at the above-mentioned sites (California, Florida, Long Island, Washington). The instruments and design for evaluation will be further improved in cooperation with school district personnel.

FUTURE OF THE PROJECTS

It is our understanding that both projects will continue. One of the big questions that always arises is about cost. As far as the Berkeley model is concerned, the Bureau of Health Education will be sending out information related to cost of materials and evaluation. This will be shared with you as soon as it is made available.

The Seattle Model is still in the developmental stage so no costs are as yet finalized. Every attempt is being made to keep them as low as possible.

ALA staff will be available to consult with lung associations relative to the projects. We request in turn that associations keep the national office informed of progress of the projects in their area and any problems which occur.

ALA has appointed Ms. Rosalind Bilford, a member of the ALA Board, as its representative to a committee which is acting in an advisory capacity to the Bureau of Health Education relative to these projects. One of the immediate tasks for ALA will be to review the Berkeley fourth through seventh grade units and update them scientifically and material-wise from a lung association standpoint.

The coming year is clearly crucial to the future of the projects. Even with continuing government funds, the projects will need the commitment and support of Boards of Education for it is here that the ultimate responsibility for education lies.

School districts are responsive to public interest and pressure and it may be here that the voluntary agencies can play their greatest role in supporting the projects. If we can demonstrate to the community that comprehensive health education is as important to children as the traditional 3 R's, we may find the way to accomplish the goal of quality health education for every child throughout his primary and secondary school experience.

The Lung Association has the opportunity, along with others, to play an important role in bringing this to pass. If we are successful, we will have achieved one of the objectives of our program: to promote good lung health among the children of the U.S. via an educational approach geared to the prevention of lung disease. The following page lists some ways in which lung associations can begin or expand their support for these projects.

SUGGESTED ACTIONS FOR LUNG ASSOCIATIONS

I. Board and Staff orientation to the project.

II. Arrange for an on-site visit to one of the school districts currently in the project. This may include representatives from the Dept. of Education or individual school boards, PTAs, teacher training institutions, etc.

III. Spearhead a meeting of voluntary agencies to discuss co-ordinated support for the project.

IV. Support a demonstration project to get the project started in one school district.

V. Underwrite part or all of the costs in teacher training and/or resource materials for the units.

VI. Work within the community to gather public support. Note: There is a 20-minute film on the project available through the Community Program Development section of the Bureau of Health Education, Center for Disease Control, 1600 Clifton Road, NE, Bldg. 9, Atlanta, Georgia 30333.

VII. Work with state departments of education and state legislators to seek support for the project.

VIII. Explore outside funding sources such as foundations and interested citizens.

IX. Work with the media to get needed publicity for the project.

X. Provide resource material and resource people once the curriculum is in place.

PRIMARY GRADE HEALTH CURRICULUM PROJECT - SEATTLE MODEL

BRIEF OUTLINE OF KINDERGARTEN UNIT

Happiness is Being Healthy

Introductory Phase

Motivating pupils to learn about themselves
Introducing pupils to stations and procedures

Phase I: Happiness is My Five Senses (a general awareness of senses and emotions)

Studying five senses
Learning about feelings

Phase II: Happiness is My Happy Health Helpers and Me

Learning about community helpers such as firemen, policemen, doctors
Learning about school helpers such as teachers, principals, and nurses
Learning about home responsibilities, the role of family and neighbors

Phase III: Happiness is My Healthy Smile

Awareness and appreciation of the teeth
Learning the structure and function of the teeth
Studying problems and diseases of the teeth
Learning about care and prevention of dental problems

Phase IV: Happiness is a Healthy Me, Always

Learning about problems that occur without proper rest, exercise, good health and safety habits
Studying about foods and nutrition
Finding out about germs and disease
Learning about safety, smoking, and drug hazards

Phase V: Happiness is Trying, Smiling, Sharing, and Caring

Learning how to make decisions
Learning about growing up
Sharing with and caring for others
Discovering more about emotions and how to deal with them
Learning to cooperate and work together

Culmination Phase

Presenting a puppet show
Sharing a nutritious snack with parents

PRIMARY GRADE HEALTH CURRICULUM PROJECT - SEATTLE MODEL

BRIEF OUTLINE OF GRADE ONE

Super Me!

Introduction Phase

Discovering the uniqueness of self
Observing similarities and differences between self and others
Developing an appreciation of self
Discovering that each person is unique
Observing similarities and differences in likes and dislikes
Learning about the wonderful human body

Phase I: Me! The Super Machine!

Learning the important parts of the body
Discovering through exercise how the body parts work
Using learning centers to reinforce knowledge about the body
Learning to get along well with others
Discovering that everyone has similar feelings
Exploring emotions and feelings—both good and bad

Phase II; Appreciation of the Senses of Taste, Touch, and Smell

Learning about the five senses from books, films, and other media
Focusing on the senses of touch, taste, and smell—utilizing experiments, books, and filmstrips
Using multimedia learning centers to reinforce appreciation for, and knowledge about the sense of taste, touch, and smell
Learning how drugs, air pollution and other hazards affect the senses

Phase III: Structure and functions of the organs of taste, touch, and smell

Studying in depth about the skin, nose, and tongue
Learning the role of the nervous system in relation to the senses
Using mutimedia learning centers to reinforce the knowledge about the skin, nose, and tongue

Phase IV: Problems and Hazards of the Sense Organs

Learning about germs and the diseases they cause, such as colds, chicken pox, mumps, and other diseases
Learning how to protect the body from diseases
Learning how the body fights disease
Identifying persons such as teachers, nurses, parents, doctors and others help pupils stay well
Introducing safety rules about food, medicine, and play
Learning the importance of body cleanliness

Phase V: Prevention—Care of the Body

Strengthening the concepts of developing good health habits
Developing deeper appreciation for the body and the realization that each person is responsible for themselves
Learning more about nutrition, exercise, and safety

Culmination

Presenting highlights of the Health Unit to parents on curriculum day

PRIMARY GRADE HEALTH CURRICULUM PROJECT - SEATTLE MODEL

BRIEF OUTLINE OF GRADE TWO

Sights and Sounds

Introduction Phase

Discovering how people communicate emotions with the face and body
Learning what emotions are
Learning how to cope with the emotions of self and others

Phase I: Awareness of body senses

Learning the five senses of sight, hearing, taste, smell and touch
Learning what the senses do, how they work together and help in communication

Phase II: Appreciation of sight and hearing

Developing a deep awareness of how sight and hearing enrich people's lives
Discovering the problems of the deaf and/or blind
Discovering the communication problems of the blind and deaf
Learning braille and other means of communication

Phase III: Structure and function of the eyes and ears

Learning the parts of the eye and their functions
Learning the parts of the ear and their functions
Learning how seeing and hearing helps persons learn, communicate, and survive in the environment around them

Phase IV: Diseases and injuries of eyes and ears

Studying about vision problems and disease
Learning about the causes of eye injuries
Learning about the causes of hearing loss, noise pollution, diseases of the ear, and accidents

Phase V: Care of eyes and ears

Rediscovering the importance of good nutrition in relation to good health
Learning which foods are necessary for healthy eyes and ears
Reviewing safety rules, especially those that apply to caring for the eyes and ears
Learning ways that defective eyesight and hearing can be improved

Culmination

Presenting highlights of the Health Unit to parents on curriculum day

PRIMARY GRADE HEALTH CURRICULUM PROJECT - SEATTLE MODEL

BRIEF OUTLINE OF GRADE THREE

The Body - Its Framework and Movement

Introductory Phase

Making dummies to compare to real persons
Learning about the marvel of movement
Learning about body systems in general

Phase I: Awareness of Body Systems

Studying six body systems utilizing learning centers
The nervous system, the respiratory system,
the circulatory system, the digestive system,
the skeletal system, the muscular system

Phase II: Appreciation of Muscles, Bones, and Body Movement

Exploring body mobility by expressing feelings and emotions through movement
Learning about the way young bodies grow and develop
Studying general safety practices utilizing six study centers

Phase III: Structure and Function of Bones and Muscles

Learning about cells and how they work
Studying in depth about muscles, bones, and cells in five study centers
Learning about bones and joints
Comparing human skeletal framework to other animals
Learning more about muscles and how they move the body

Phase IV: Problems Concerning Muscles and Bones

Discovering that the body is a finely balanced machine
Studying about the effects of smoking and disease on the human body
Learning how poor posture and nutrition can upset the finely balanced human machine
Learning about other diseases that affect the bones and muscles

Phase V: Care of Bones and Muscles

Learning more about good nutrition
Studying about the proper use of medicine and drugs
Learning more about good health habits in five learning centers
Learning about the importance of sleep, rest and exercise
Becoming acquainted with different kinds of health workers and services in the community

Culmination

Presenting a creative movement skit to parents.
Presenting a skit to parents based on film "Octopuff in Kumquat"
Organizing a health fair for other pupils

ELEMENTARY SCHOOL HEALTH CURRICULUM PROJECT - BERKELEY MODEL

BRIEF OUTLINE OF GRADE THREE

About Our Eyes

Introduction Phase: Seeing Beauty and Truth

- Motivation
- Sight -- A Priceless Treasure
- We Look But Do We Really See?
- Student Outline and Parent Participation

Phase I: Awareness of Five Senses and the Brain

- Overview of Messengers to the Brain
- Student Projects to Show Sense Organs to the Brain

Phase II: Appreciation of Vision: Understanding of Blindness, Sight, and Light

- Sight and Sightless
- Light and Sight

Phase III; Structure and Function of the Eye

- Eyes Seen From the Front
- Eyes Seen From the Side
- What's Inside?
- Overall Function of the Eye
- Evaluation
- Real Eyes!

Phase IV: Eye Problems, Eye Diseases and Accidents

- Why Do Many People Wear Glasses?
- Eye Diseases Can Happen: What To Do?

Phase V: Prevention of Problems and Care of the Body

- Introduction: My Body
- Exercise
- Sleep
- Foods
- Poisons (cigarettes, household cleaners, sprays, medicines other drugs).
- Seeing Truth and Beauty Through Very Careful Looking
- A Healthy Body: A Priceless Treasure

Culmination Phase

ELEMENTARY SCHOOL HEALTH CURRICULUM PROJECT - BERKELEY MODEL

BRIEF OUTLINE OF GRADE FOUR

About Our Digestion

Introductory Phase: Energy Forms and How They Work

Motivation
Energy
Readiness for the next phase

Phase I: Awareness of Body Functions

Finding Out About Our Bodies
Synthesizing What We Know
Tobacco and the Body

Phase II: Appreciation of Digestive System: Food to Energy

Energy (Reviewed and Extended to Cells)
Cells: Structure and Function
How Your Body Makes Its Fuel
The Miracle of Life
Nutrients
Alcohol (is it a food?)

Phase III: Structure & Function of Digestive System

Introduction
General Overview of the Digestive System
What Our Digestive System Does to Foods
Using What We've Learned
Ideas About Smoking & Digestion

Phase IV: Problems of Food and Digestion

Stomach Aches, Germs, Immunizations
Food Poisoning
Digestive Organs--What Can Go Wrong?
Water Pollution

Phase V: Prevention of Digestive Problems & Care of the Body

Review of Major Concepts and Goal
Dental Care, Smoking, Nutrition, Alcohol, Drug Abuse and Other Health Behaviors
Nutrient Reinforcement

Culmination Phase: To be developed by students

ELEMENTARY SCHOOL HEALTH CURRICULUM PROJECT

Brief Outline of Grade Five

Lung Unit

Health Goal: The goal is that children will practice health habits which will help to prevent diseases of the respiratory system and other health problems, and which will be conducive to maximum health of the body.

Introduction: Vital and Immediate Need for Air

Phase I: Awareness of the Respiratory System Within the Body Systems

A. Introduction
B. Preparation of Students for Learning Stations
C. Learning Stations
D. Coordination of Body Systems and Alcohol
E. Respiratory System Within the Body Systems

Phase II: Appreciation of Lungs --- AIR

A. Introduction
B. Characteristics of Air - What does it do?
C. Composition of Air - What is in this air?
D. Air Pollution - What do we mean by air pollution?

Phase III: Structure and Function of the Respiratory System

A. Basic structure of the Body
B. Cells and tissues
C. Respiratory System
D. Exercise and posture as related to lungs

Phase IV: Diseases of the respiratory system

A. Introduction to Diseases
B. Effects of Diseases to lungs

Phase V: Prevention of Diseases of the Respiratory System and Care of the Body

A. Health Behaviors
B. Alcohol and Drug Abuse
C. Volunteer and Official Health Agencies

Culmination

ELEMENTARY SCHOOL HEALTH CURRICULUM PROJECT

Brief Outline of Grade Six

Heart Unit

Health Goal: The goal is to help each child to gain a deep understanding of, and an appreciation for his circulatory system and to learn and practice ways of living which will help him to prevent heart attack and other arterial diseases and to develop and maintain healthy hearts, arteries, and general good health.

Introduction: Importance of Studying the Circulatory System

Phase I: Awareness of the Circulatory System within the body systems

Phase II: Appreciation of the Heart - Blood

A. Basic Structure of the Body
B. Blood

Phase III: Structure and Function of the Circulatory System.

A. Heart
B. Blood Vessels
C. Blood Pressure
D. Vital Arteries

Phase IV: Diseases of the Arteries and Care of the Body

A. Prevention Wheel
B. Diseases

Phase V: Prevention of Diseases of Arteries

A. Foods
B. Exercise
C. Stress and Mental Health
D. Smoking
E. Alcohol
F. Drug Abuse

Culmination.

ELEMENTARY SCHOOL HEALTH CURRICULUM PROJECT - BERKELEY MODEL

BRIEF OUTLINE OF GRADE SEVEN

Brain Unit

Introduction Phase

Phase I: Awareness of the Body Systems

- Overview of Each System of the Body
- Smoking, Body Systems, and Decisions
- Medicines Used for Body Systems

Phase II: Appreciation of the Nervous System

- Relationship of the Nervous System to Other Systems
- How the Human Nervous System is Different From Other Animals
- Putting Our Ducks in a Row

Phase III: Structure and Function of the Nervous System

- Overview of the Nervous System
- Neuron in Detail
- Central Nervous System (Brain)
- Peripheral Nervous System (Sense Organs)
- Endocrine System (Its relationship to the nervous system)
- Neurons and Drugs
- Evaluation

Phase IV: Variations & Disorders of Nervous System

- Normal Differences
  - Abilities--talents
  - Malfunctioning of brain and prevention
- Disorders and Diseases
  - Introduction (prenatal)
  - Cerebral Palsy
  - Epilepsy
  - Mental Retardation and Other Disorders
  - Veneral Disease
- Mental Health and Illness

Phase V: Prevention, Care and Functioning

- Sleep and Rest
- Foods
- Drug Abuse
  - General for total group
  - Study Centers
    - Stimulants
    - Depressants
    - Hallucinogens
    - Heroin
    - Tobacco
    - Alcohol

Culmination Phase