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Workshop Report on Health and Nutrition in the Elementary School

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NUTRITION IN THE ELEMENTARY SCHOOL

NURSERY THROUGH PRIMARY INTERMEDIATE AND UPPER GRADES



CENTRAL WASHINGTON COLLEGE OF EDUCATION

ELLENSBURG WASHINGTON SUMMER SESSION QUARTERLY 1945

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WORKSHOP REPORT
on
HEALTH and NUTRITION
in the
ELEMENTARY SCHOOL

Suggestions for Classroom Teachers From Nursery
Through Intermediate and Upper Grades

Prepared by
Workshop Staff and Participants

A Quarterly Bulletin
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INSTRUCTIONAL STAFF AND PARTICIPANTS

The outstanding feature of the workshop was that it included a cross section of leaders in various fields of Public Health and Education. The following participated a portion or all of the time.

● ADMINISTRATORS AND TEACHERS

Co-Directors:

Amanda Hebler, Director of Teacher Training
Helen Michaelsen, Head, Home Economics Department

Demonstration Teachers:

Mary Clanfield, 2nd grade, College Elementary School
Frances Shuck, 4th grade, College Elementary School

Visiting Professors:

Dr. Jennie I. Rowntree, Nutritionist, University of Washington
Dr. Ethel M. Thompson, Nutritionist, University of Arizona

● OTHER CONTRIBUTORS

Dr. R. E. Cutts, Pediatrician, State Department of Health
Miss Clare M. Hartnett, Nutritionist, State Department of Health
Mrs. Bess Alverson, Kittitas County Public Health Nursing Service
Miss Dorothy Norrine, Kittitas County Public Health Nursing Service

Mrs. Ruth Woods, Nursery School

Miss Mabel T. Anderson, Child Development

Miss Lillian Bloomer, Intermediate Grades

Dr. Loretta Miller, Remedial Education

Mr. Leo Nicholson, Health and Physical Education

Miss Susan McCauley, Women's Health and Physical Education

Mr. Gordon Rutherford, Junior High School, Supervisor, State Department of Public Instruction

Mr. Ed Rogel, Visual Education

Mrs. Margaret T. Hannay, President, Washington Home Economics Association

Dr. Elaine Forsythe, Social Science

Mr. Selden Smyser, Social Science

Mr. Harold Quigley, Biological Science

Miss Josephine Burley, Art

Mr. Glenn Hogue, Industrial Art

Miss Sarah Spurgeon, Art

● OTHER PARTICIPANTS

State Department of Public Instruction, Olympia: Mr. Gordon Rutherford, Junior High School Supervisor; Marjorie Eastbrooks, Health Consultant

State Board of Vocational Education: Mrs. Nell C. Kantner, State Supervisor of Home Economics

State Department of Health: R. E. Cutts, M. D., Head Maternal and Child Hygiene and Crippled Children's Section; Clare M. Hartnett, Nutrition Consultant

Kittitas County Public Health Nursing Service: Mrs. Bess Alverson, Miss Dorothy Norrine

State Nutrition Committee: Virginia Houtchens, Executive Secretary.

Division of Supervision, Seattle Public Schools: Edna Martin, Director of Home Economics; Vera Alderson, Curriculum Assistant

Washington Home Economics Association: Margaret T. Hannay, President

American Red Cross: Mrs. Ruth Palmer, Field Nutritionist

Classroom Teachers in the Elementary Grades: Miss Frances Evans, Wenatchee; Mrs. Marjorie Evans, Winthrop; Mrs. Exie M. Bunker, Auburn; Mrs. Belle S. Coan, Renton



WORKSHOP PURPOSES AND OUTCOMES

A workshop, offering opportunity as it does for members to work together toward a specific end, brings out a good many things that should be made available to others in the field. The records of the Nutrition Workshop at Ellensburg have been collected with the hope that this publication will further the teaching of nutrition in the elementary school. It will be noted that nutrition is not conceived as a new subject, something isolated, separate, or even a part of a health unit, but is incorporated in science, social studies, art, language arts, and arithmetic, and developed in relation to children's total well being.

Participants in the nutrition workshop were convinced that the elementary school must take the primary responsibility for strengthening and improving health habits. Demonstration teaching in the second and fourth grades each morning gave concrete evidence that children in these grades, if given the opportunity, can acquire and apply both the concepts and attitudes necessary for healthful food habits. It is at the elementary level that children are establishing health habits. By the time they reach the junior high school their habits of living are established to the extent that it is difficult to change them. Therefore it is in the elementary school that nutrition education can best function.



● RECOMMENDATIONS

The college and elementary teachers, supervisors and administrators, health workers and nutritionists present, agreed on the following ways of enriching health teaching.

1. The study of food and its relation to health should be a part of school living and included in social studies, science and arithmetic work, and especially in the selection of food in the lunchroom.
2. Kits of teaching aids should be made available to superintendents for use in the elementary schools; these packets to include general materials for the teachers and additional packets for the children at the primary, intermediate, and upper grade levels.
3. Nutrition should become an important part of the In-Service Training made available to teachers. School systems should be encouraged to offer short periods of intensive study and conferences where teachers may receive the help of specialists both in nutrition and elementary school procedures.
4. Nutrition should be an essential part of the required teacher education curriculum. This curriculum should stress the means of applying the knowledge and including such experiences as will make clear the importance of good food selection in child health.
5. The nutrition program should be based on the needs of a school as shown by physical examinations, observation, and other screening tests by teachers and nurses, diet records, and other health records. A school health council to consider these needs and plan ways of meeting them most effectively may well include an administrator, members of the teaching staff, a doctor and/or nurse, a lunchroom manager or cook, the custodian, and student representatives.
6. Instructional aids should be analyzed by each teacher for the specific learnings intended. After such aids have been employed for specific emphasis and followed by checks to show their value in relation to the purpose intended, the usefulness of these and suggestions for additional needed materials should be made known to those who produce them.
7. Parent participation is essential in the school health program to build the right attitudes and improve the health of the community. When parents and teachers plan together and realize that they are working toward the same goals the effectiveness is more than doubled. Newer concepts which the school presents and the established habits in the family must be reconciled if good is to result.

NUTRITION EDUCATION FOR ELEMENTARY TEACHERS

Helen Michaelsen,
Head, Home Economics Department, C. W. C. E.

● NUTRITION MUST BE MADE EFFECTIVE

Health education calls for positive and constructive ways of making nutrition effective. Mere knowledge without application counts for little, and it is only in the young that habits are easily instilled. The means of getting children properly taught to do essential things, and not merely to recite nutritional facts, demands constant consideration. If nutrition is to be effective, each teacher must be made aware of what food can do for human beings, what food habits need changing, and what teaching methods will produce results in terms of improved health.

● WORKSHOP SEEKS METHODS

The Nutrition Workshop was designed to draw together people who could find an effective approach to these problems, to decide what was most fundamental for the well being of children, and to devise feasible ways of incorporating material into the curriculum. It was evident in every discussion that elementary teachers need training in nutrition and help and guidance in adjusting the material to the children's needs.

Steps must be taken to make every elementary teacher see that the physical and nutritional state of children is affecting their attitude and mental abilities. Studies must be made to find at what ages children are ready for different ideas and practices. Educational methods must be appraised as to their effectiveness in improving children's health status. The goal is not to get children reciting health rules and memorizing lists of food nutrients but to have them eating and liking foods essential for their well being.

● TEACHERS NEED NUTRITION TRAINING

Little can be accomplished unless the teacher has had training in the fundamentals of nutrition. Only those with training will see the children's health needs and opportunities in the classroom. Only these will have conviction regarding the need for an adequate diet; and a realization that the food people eat affects their health, their physical and mental stamina, and their nervous and emotional stability. With authoritative information, and confidence in her knowledge, the teacher with good training will find many opportunities for good health teaching, whereas the enthusiastic but ill trained teacher may do much to develop fears and faddism.

● CRITICAL JUDGMENT NEEDED

Children, teachers, and parents are harassed on every hand by commercial advertisers, quacks, and progenitors of faddism. Over the air, on the counter, in the ads, they are solicited to eat this food, buy that pill, or take these vitamins. If children are to learn to evaluate health advice sanely and to be wary of spectacular cures, teachers must have accurate information and critical judgment based on sound knowledge.

● BASIC NUTRITION INSTRUCTION PROPOSED

Nutrition instruction given teachers should develop in them a scientific approach to and an economic understanding of foods, and information given them should be intensely practical. Teachers should be able to recognize minor dietary lacks that lead to difficulty, and know how to supplement inadequate dietaries; they should be able to relate cost of food to nutritive value and know how to substitute the less expensive, less perishable, seasonal foods for the more expensive, less available, transported ones; and they should recognize the fact that even with adequate knowledge food habits are not easy to change but that there are subtle ways of effecting improvement.

● SCHOOL LUNCH PROGRAM IMPORTANT

Nutrition needs have too long been separated from the pleasures of the palate. If nutrition instruction given teachers is to be effective, teachers should be brought to recognize the educational possibilities of the school lunch and realize the constantly improving character of the lunchroom through better in-service training of cooks. The lunchroom is no longer regarded as a "filling station", or "farm surplus dumping place", or even a "health promotion activity", but rather an intrinsic part of the health and educational program. There is need to improve not only the health of children but their habits and attitudes. As community attitudes regarding the school lunchroom are brought up to date, as teachers increase the effectiveness of their health teaching, and as the cooks sense their educational opportunities, the school health program can be unified and greatly strengthened.

● COOPERATION WITH OTHER HEALTH AGENCIES URGED

The teacher who has basic knowledge will know of the agencies in the health field and will cooperate with them. Schools are in a position to influence the lives and homes of children and that influence will be far greater if the public health service, school administrators, teaching staff, school lunchroom service, and homes work together on common health problems. Throughout the workshop it was continuously brought out that health education is no longer considered the exclusive obligation of any one agency—but one in which numerous groups share.

● NUTRITION KITS SHOULD BE MADE AVAILABLE

Many useful, non-technical, authoritative bulletins and pamphlets have been published which should be made available to teachers. Kits of scientifically accurate materials, as well as suggested activities, need to be assembled and offered to every elementary school teacher. The Central Washington College workshop members evaluated, selected, and proposed a list of such materials, which list will be found in the back of this publication. By utilizing these materials, and other reliable sources of help that become available, every elementary school teacher should be able to include nutrition in the school program and make it useful and interesting.

● TRAINED TEACHERS WILL PUT NUTRITION INTO ACTION

Teachers who have a feeling for elementary school methods and have basic nutritional knowledge will endeavor:

To create an atmosphere conducive to the establishment of right attitudes toward health in the lunchroom and in the school room.

To interest children in, and initiate activities essential to healthful living.

To teach accurate health information in an interesting way.

To recognize the symptoms of poor health.

To understand the economic and other problems of parents, and to work with them and gain their support.

To maintain her own health and exemplify desirable health habits.

● EXAMPLE OF TEACHER A POWERFUL AID

Since the success of the nutrition education program depends primarily upon the teacher, practicing what she preaches is as important for her as for parents. What she knows is important but more significant is what she herself does and how she directs children. Teachers who do not know nutritional needs, or who fail to recognize the fact that their own choices will affect choices and attitudes of children, may take light salads for lunch, pass up substantial foods, and make up extra calories with desserts, coffee with cream, and candy bars.

● COLLEGES AND UNIVERSITIES CAN GREATLY ASSIST

It is a truism that every teacher teaches what she knows best. If a teacher is handicapped by a lack of nutrition training, she will not only overlook many opportunities for good health teaching, but there is danger that nutrition teaching will actually be neglected. Teachers are likely to feel that the subjects they were taught in school are those most fundamental. Basic nutrition knowledge should be incorporated in the training of all elementary school teachers. If colleges and universities would offer Saturday classes, in-service training programs, workshop opportunities, short summer school courses, or something comparable, for those already teaching, much could be accomplished. It is a serious lack when teachers have not had nutrition training. It is important that they be given an opportunity to get it.

GOOD BREAD

Apple Sauce
Wash, quarter, and core the apples.
Cut into pieces and cook
in a little water.
When nearly done add sugar to taste.
Rub through a sieve.



CHILDREN BUILD ATTITUDES AS THEY LEARN HEALTH AND NUTRITION

Amanda Hebel,
Director of Teacher Training, C. W. C. E.

I. WORKSHOP PARTICIPANTS ANALYZE LEARNING SITUATIONS

"Is nutrition an important part of the health program of children in the elementary school?" "Can teachers, school administrators, public health workers, and parents get together and do something about it?" "What can each of us do in our own specific situation?" Questions such as these were discussed by the members of the Nutrition and Health Education Workshop. As group thinking was brought to bear upon the various problems, the workshop participants felt that something should be done and they would start working on it. Thus the common experiences of a group of adults who were engaged in studying problems that were real to them developed a strong desire to carry out their plans in some effective way. They learned in much the same way that children learn when faced with situations that are interesting because they have reality and meaning.

As these teachers, nutritionists, and health workers, observed elementary school children participating in a variety of activities which seemed always to be accompanied with so much interest and zest for doing, they might well have asked, "How do the children get this way?" "How is the learning situation managed when the teacher is as much concerned with the attitudes which children are forming as she is in having them learn essential facts about food?" "What kinds of experience can children have at school which will prompt them to select and eat the right foods?"

II. ATTITUDES AN IMPORTANT PART OF LEARNING ON ALL LEVELS

As workshop participants observed children of different ages in the College Elementary School beginning with the Nursery, it was obvious that attitudes which attended the total learning situation were receiving consideration.

● IN THE NURSERY SCHOOL

The impression gained from a visit to the College Nursery gives this picture of three and four-year-olds at their mid-day meal.

The children look happy and relaxed, as they sit at small tables with adult leaders. Each child seems to enjoy the food which has been served him. Jerry, whose mother has said that he doesn't like carrots, is managing to eat the teaspoonful which has been put on his plate today. He

notices that Susan is enjoying the larger serving of carrots on her plate. Jerry knows from previous experience that he may go back to the serving table and get another helping of mashed potatoes which he especially likes when the first serving of carrots, meat, and potatoes has been eaten. Later the custard with its decoration of pink jello will be his for dessert. It will be only a few more days before Jerry will enjoy a fair sized serving of carrots.

Attitudes are being built constantly by the wise nursery school teacher who knows the factors which determine success in learning at this age level. Children are prepared for the lunch period by having a preceding quiet period. They rest for awhile on cots, then share in listening to music and pleasant stories. Children are also given opportunity to express themselves at this time which permits release of any emotional tensions. This careful preparation for the lunch period tends to eliminate many of the difficulties which might otherwise arise at eating time. The understanding teacher manages the entire eating situation so it is an enjoyable experience. She attempts to avoid any conflicts or emotional upsets that will interfere with digestion.

Immediately before going to the table the children wash themselves, and put on bibs. When each child is ready to eat he goes to the serving table and receives a plate of food which is served to meet his particular needs and also takes into account some of his difficulties. There are larger servings of the foods which the child has learned to enjoy, and smaller servings of the foods which are gradually being introduced into his diet. This procedure makes it not too difficult for each child to be successful in developing a taste for the variety of basic foods which he needs. In this development each child is encouraged by the teacher, but especially important to him is the pressure of the social group.

After being in the Nursery for a short time most children learn to eat with enjoyment a large variety of foods which are included in the luncheon menus. Through pleasant associations with other children and the guidance of adults who manage the total situation with intelligence, nursery school children build favorable attitudes which accompany the development of good eating habits.

● IN THE ELEMENTARY SCHOOL

For the seven and eight-year-olds in Miss Clanfield's room who prepared and served raw fruits, cooked fruits, and fruit juices in their own classroom, the mid-morning lunch was the high spot of their school day. One morning when Leroy dared to say in all frankness that he didn't like prunes they had cooked, the other children were horrified. "Leroy says he doesn't like prunes!" The group pressure was too much for Leroy and though no teacher gave advice, Leroy's dish was as clean as the others at the end of the lunch period. This incident is a good example of how group opinion serves as a strong guiding force in individual behavior. When classroom groups with common experience backgrounds develop standards of behavior, desirable habits are formed with a minimum of teacher direction. This was obvious when the children in the second and fourth grades quite naturally observed such conventions as: washing hands before eating, waiting to be seated at the lunch table until

all are present, taking small servings of food which will be eaten, and waiting ones turn to be served.

The introduction of the Washington State Dairy Council kitchenette was a "special event" for the second grade group. One morning a large covered box was found on a table in the center of the room and as the children gathered around it for group discussion, they ventured guesses as to what was inside. Some children agreed with Nancy that it might be a new pet. Others felt sure that it was a jack-in-the-box or perhaps a whole box of new toys. Donald read the first part of the label, "Washington State Dairy", but did not know the last word "Council". The other children interpreted this clue, "It must be milk." But Donald was not sure so he cautiously remarked: "I'm just going to wait and see."

The introduction of the kitchenette set the stage for the later enjoyment of a rich variety of cooking and eating experiences. Vern summarized the feelings of all the children in his sincere and frank expression, "Gee, we do make good things to eat, don't we Miss Clanfield?"

To the thinking observer, it was obvious that these children were having purposeful experience in reading and arithmetic as they followed the directions of recipes in cooking and carried out the details of the lunch service. It was noted that when the recipe for applesauce included the statement "Wash, quarter, and core the apples," Leelee said, "That means cut it in four pieces." Then as she carried out the directions with apple and knife in hand she said to herself, "I'm going to cut it in two halves; now again." "There!"

This particular situation also revealed the attitude these children were developing regarding the need for getting information from authentic sources. As one of the youthful cooks asked "Shall we use hot or cold water for the applesauce? The recipe doesn't say." Others of the group suggested that they ask Miss Michaelsen, the College Nutrition teacher, who was observing. She would surely know.

The children's own appraisal revealed their awareness of vocabulary development as they discussed experiments and studies of food. "When we learn about scientists and nutritionists we certainly learn to use big words."

In the fourth grade classroom the same rapid growth in vocabulary was noted when the children had a particularly vivid experience which made new words meaningful to them. The children solicited help from Mr. Quigley of the College Science Department for answers to some of their questions regarding the heart. As Mr. Quigley showed the children heart models and permitted each of the children to listen with the stethoscope to the heart beat of a classmate, the other children naturally used the scientific vocabulary. In context of free discussion, oral and written reports, they used such words as stethoscope, auricle, ventricle, aorta, arteries, arterioles, veins, and venules.

Mr. Quigley called attention to the need for periods of rest after strenuous activity. As the children "listened-in" with the stethoscope they noted the difference in heart rates of a child who was lying down, a child who was standing still, one who was running in place, and one who returned to the room after running around the block. The children

were surprised at the great variation in the heart and immediately drew the conclusion: "That's why we rest after we come in from play periods."

Experience with living things always makes clear impressions and attendant attitudes are firmly built. This was noted in the children's ready application to themselves of the outcomes of the "rat-feeding" experiment. They saw how irritable and restless the underfed rat was, ready to bite anyone who came near to his cage. They were quick to apply the results of the experiment. Thoughtless and unpleasant behavior of any member of their own group would bring forth the comment, "Maybe he didn't have a good breakfast."

III. SOME IMPORTANT FACTORS IN LEARNING SITUATIONS

In the situations which are described here, we find factors which are very important in developing attitudes. The second and fourth grade children helped in planning and managing the specific activities that were parts of larger units of experience. In each case the teacher did careful preliminary planning for the total unit organization. She had in mind the particular children with whom she was working, their immediate needs and interests as well as past experiences. She also decided upon the long range health objectives which would be arrived at if experiences included in the unit become a part of each child's "thinking" and "doing".

In Miss Shuck's room the nurses report on the health examination stated that many of the fourth grade children had poor teeth. Here was a real need and Miss Shuck immediately realized that these children and their parents would profit by learning about the relation between nutrition and teeth. Because children of this age are interested in "whys" and "wherefores" the children's questions served as incentives to much follow-up study.

"Why are the six-year molars important?" "What causes the teeth to decay?" "What can we do to prevent decay?" "Why do we have different kinds of teeth?"

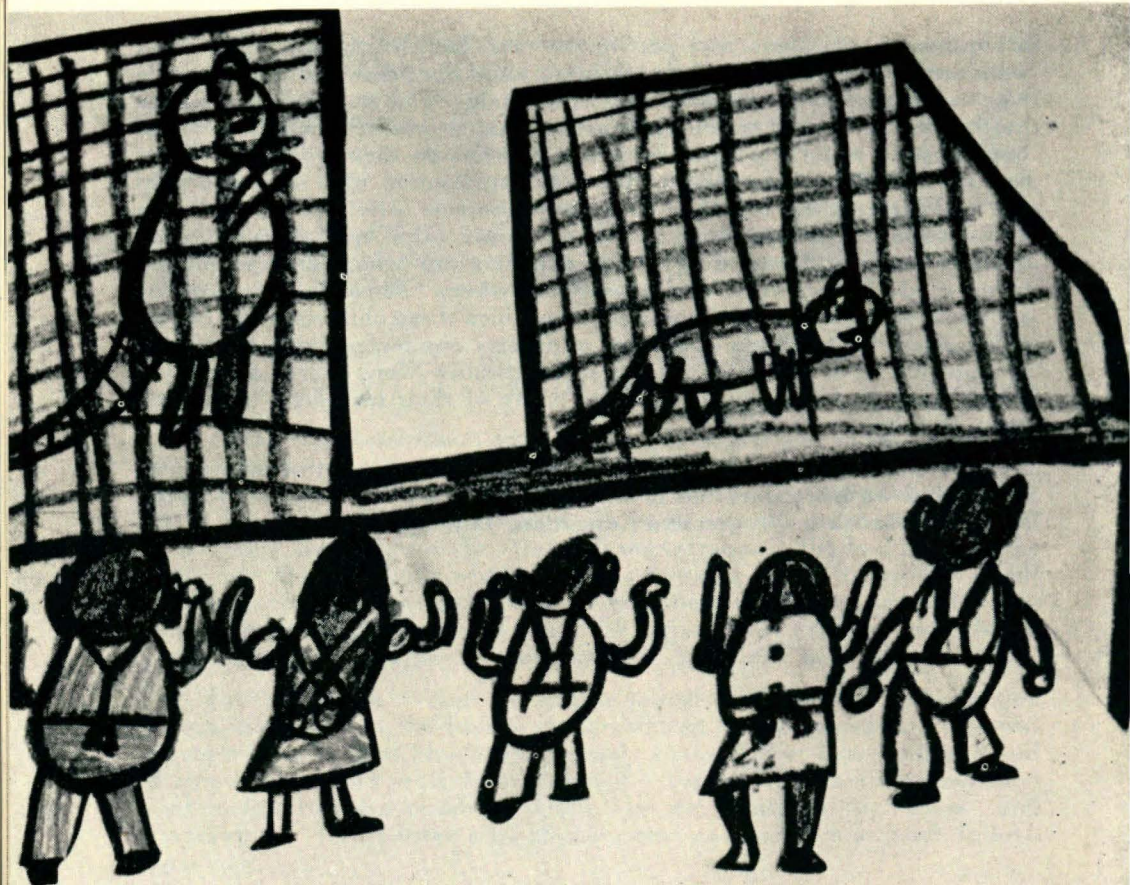
To meet the children's interest the teacher planned with them for a variety of experiences which would make the follow-up learnings meaningful. Pictures, charts, and models that gave facts in impressive form, were used. One experiment demonstrated what happens to a bone when calcium is removed. Soon the children were wholeheartedly accepting the fact that they should drink milk and have sunshine so phosphorus and calcium will be deposited in the bones.

The children participated in activities that were real to them and therefore meaningful and vital. They made connections with everyday living. Reports from parents indicated that school experiences carried over into the home. Children checked family meals. Mothers were challenged by ten-year-old sons with questions such as, "Do our meals today include food from each of the seven basic food groups?" 1) green or yellow vegetables, 2) citrus fruits or tomato juice, 3) milk and milk products, 4) meat, fish, poultry or eggs, 5) cereal and bread, 6) butter or fortified margarine, 7) potato, other vegetables or fruits.

The teachers in these classrooms appreciated the value of having

a number of specialists take part in the total health program. Situations were arranged which helped the children build confidence in those people who could give them guidance and direct help. The study of community helpers in the second grade emphasized this, as did the situation in the fourth grade when the children found answers to their question, "How can specialists, such as nurses, doctors, nutritionists, and scientists help us?" Wide reading together with daily contacts with the school nurse and occasional meetings with nutritionists, and other specialists gave the children some understanding of the contributions which are continually being made by scientists and research workers. Through a variety of experiences in getting facts and understandings these children were developing scientific methods in solving problems connected with all phases of nutrition and health and favorable attitudes were being developed which prompted them to incorporate many of their learnings "into their ways of living."

"We live what we learn what we in our hearts accept as our way of living, and we learn it as and in the degree that we accept it."—William Heard Kilpatrick in *Progressive Education*, January, 1940.



This pair of rats had all the things they should have had except that one had milk and the other one didn't. The rat that had milk grew much faster than the one that did not. He had a better disposition too.

NUTRITION IN A SECOND GRADE PROGRAM

Mary Clanfield, College Elementary School

SOCIAL STUDIES AND NUTRITION IN SECOND GRADE

● THE SOCIAL STUDIES PROGRAM

While there are many occasions when nutrition teaching may well be integrated with experiences in health, science, arithmetic, reading, language, and art, the social studies program provides the most natural and effective means of correlation. This is particularly true at the second grade level where the nutrition and social studies activities fit together so naturally that either one may be utilized as a motivation for the other and the learnings in one area serve to strengthen and enrich the learnings in the other area.

The major emphasis of the social studies curriculum at this level is upon the community and its workers. The child is given an opportunity to learn of the services rendered by the community workers and to learn that he has responsibilities to accept and discharge as his contribution to community life.

This study of the community and its workers is organized to meet important objectives of the primary social studies, which are:

1. To give the child true and meaningful concepts of his environment.
2. To give the child opportunities to work and live with other people as a responsible individual in a desirable group relationship.
3. To give the child experiences which will bring about understanding and appreciation of the interdependence of people in home, school, community and other sections of the country.
4. To give a beginning realization of the way in which man's life is influenced by his environment.

● OPPORTUNITIES FOR NUTRITION TEACHING WITH SOCIAL STUDIES

Important community helpers who may be studied in any community may be divided into two groups: (1) the community workers who provide our food, (2) the community helpers who protect us.

The study of both of these groups of community workers may easily be correlated with nutrition teaching which at this level has as its main objectives:

1. Developing an interest in the foods which are necessary for normal growth, plenty of energy, attractive appearance, and happy dispositions.
2. Establishing a wholesome attitude toward eating necessary foods at regular meal times, three times a day.
3. Recognizing that rest, sleep, cleanliness, and exercise are also important to physical well-being.

An examination of the objectives of both areas reveals that attitudes

and habits rather than technical knowledge should be emphasized. Then, if effective learning is to result from social studies and nutrition teaching, the value of child participation in real experiences should not be overlooked. To make child participation meaningful, a variety of direct experiences should be provided through group-planned excursions and investigations of the community, simple experiments, activities in food preparation and serving, and interviews with people who may be regarded as authorities in their fields. Vicarious experiences from books and visual aids may be utilized in a meaningful way. Fortunately these types of learning activities may be carried on in any school if the teacher surveys the resources of community and school, plans wisely, and uses available and inexpensive materials advantageously.

A unit on "Community Workers Who Provide Our Food", gives excellent opportunities for integrating nutrition and the social studies. In the College Elementary School such a unit was initiated through the second grade children's interest in the local corn cannery. The children visited the cannery and through discussions of this experience became aware of the contribution of the cannery workers to our food supply and to the war effort. This led quite naturally into a discussion of other community workers who supply our food; namely, grocers, bakers, restaurant workers, butchers, creamery workers, farmers, truck drivers, and railway workers.

● LOCAL FARM PRODUCTS EMPHASIZED

Since this is primarily an agricultural community, the children chose to study about farmers first. Before they began to study the farmer's contribution, the teacher suggested that the children consider what foods were necessary to keep them strong and healthy. They listed milk and milk products, fruit, vegetables, cereals and bread, meat and eggs. This gave a basis for organizing and correlating social studies and nutrition materials in relation to the children's interest in familiar foods. Realizing the importance of the foods to them personally, the children became appreciative of the workers upon whom they depended for their supply.

The study of the dairy farmers and creamery workers, who provide milk and milk products, presented a good opportunity for discovering that milk is important for growth and for building strong bones and good teeth. To emphasize this fact a diet experiment with white rats was brought to the children by the college nutrition class. This showed vividly the difference in size and appearance of two rats, which had the same diet of good food with the exception that one was given milk, while the other one was not. Betty Lou's spontaneous remark, "Oh, boy, Miss Clanfield, I'm sure going to drink my milk so I won't grow little like the little rat," was typical of the children's reaction to the results of the experiment.

As the children learned of the part the wheat farmer plays in providing food, they became interested in the study of wheat and other cereal grains and their importance in the daily food supply. The children examined grains of corn, wheat, and oats, which had been soaked for a couple of days, and learned that each has three parts; bran, endosperm, and germ. To emphasize the need for whole grain cereal in the diet the teacher told the story of the doctor who discovered that beri-beri was a result of the large proportion of polished rice included in the diet of

his patients. This also illustrated that doctors, scientists, and nutritionists experiment to learn what foods are good for people and thus have reasons for their statements.

The children brought to school cereal cartons which they examined for the statement of food nutrients. They sampled prepared cereals and cooked and served a whole grain cereal for the mid-morning lunch. As a result of these experiences they readily accepted the importance of eating whole grain cereals.

An excursion to the bakery followed preliminary study of how the baker helps. In connection with this study the children learned the comparative values of whole wheat bread, and bread made from finely milled grain.

● COOPERATION WITH COMMUNITY HELPERS

In the unit "Community Workers Who Protect Us" there were many opportunities to develop safety and health rules which children must observe in order to fulfill their responsibilities as community helpers. In the College Elementary School the children considered the work of the local police, the Junior Safety Patrol, the doctors, the dentists, public health nurses, the garbage collectors, street cleaners, and sanitary inspectors.

The children learned that it is necessary to cooperate with these community workers if they are to give their best service to the community. The importance of good health practices, good food habits, and regular medical and dental check-ups was stressed. The paramount importance of diet in building good teeth was emphasized and the correct way of brushing teeth was demonstrated by use of a denture.

● CHILDREN SHARE WITH PARENTS

In addition to the experiences described above the children made murals, pictures, charts, books, and movies to record their various activities. Other children and the parents were invited to view these records and hear the children tell about them. The parents' visits were particularly valuable in establishing home and school cooperation.

● DIETARY SURVEY

During the short summer session, it seemed desirable to concentrate on a nutrition unit. A survey which was made by having the children make pictures of their breakfasts, and also write a list of items, disclosed that many children were not having fruit or adequate breakfasts.

● THE MID-MORNING LUNCH

The results of the survey led to teacher-pupil planning for serving fruit or fruit juices for the mid-morning lunch. Each week committees were made responsible for buying and serving the lunch. Usually a fruit juice or orange was served, and for variety the children cooked prunes and made applesauce. The tables were arranged attractively by committee workers and good manners and pleasant conversation were stressed. The children established the rule that no one was to say he didn't like this or that but to quietly taste the lunch and see if he might not learn to like it. After the children finished lunch and were excused

by the host or hostess at each table, the cleanup committee took charge of clearing the tables, washing and putting away the dishes.

● GOOD BREAKFASTS NEEDED FOR NUTRITION

The importance of plenty of sleep was stressed so that children might be rested in the morning and get up in plenty of time to eat good breakfasts. Particular emphasis was placed upon the need for a good breakfast if the food needs of the entire day were to be met. White rats from the college nutrition class again played an important part. One rat had all the food he could eat and was sleek and healthy looking, while the other rat which had only two-thirds as much to eat, was noticeably smaller. He was also thin, nervous, and irritable. Miss Michaelsen pointed out that this rat was like the child who doesn't eat a good breakfast and who leaves food on his plate at lunch and dinner. The children accepted her comparison whole-heartedly and referred to it frequently in their conversations.

● CHILDREN PLAN, PREPARE, AND SERVE BREAKFAST

As a culmination of the good-breakfast unit the children planned and served a guest breakfast of orange juice, oatmeal, cocoa, and whole wheat toast. This entailed much group planning and cooperative effort. All of the children helped plan the menu and made place cards, place mats, and decorated napkins. Each child served upon two committees. These committees included: writing invitations, shopping, serving, arranging and setting tables, hospitality, cooking and cleanup.

The breakfast was successful, not only because of the "very, VERY, good food we cooked," but because each child had participated in a rich and meaningful experience which contributed to his individual growth as a responsible member of the class group.



NINE AND TEN-YEAR-OLDS STUDY NUTRITION

Frances Shuck, College Elementary School

Some of the activities carried out in the fourth grade of the College Elementary School during the past year gave special emphasis to nutrition. It became obvious that this important phase of health could be tied in with daily classroom experiences and form a natural part of science and other subjects.

● CHILDREN ASSIST WITH SCHOOL LUNCH PROGRAM

One activity of particular interest to the children was assisting in the management and planning of the school hot lunch program. This offered many opportunities for developing good health habits and attitudes. The importance of an adequate balanced diet, desirable eating habits, cleanliness, reduction of food waste, and pleasant surroundings were stressed.

In the initial planning period the children divided the work among committees. The committee responsible for rearranging the lunchroom and setting up plans for serving enlisted the aid of the entire class. They made a trip to the lunchroom and tried out the ideas suggested for entering and leaving the room, for getting food at the serving counter and for returning dishes. After a discussion evaluating the various plans they selected one to use. In order to make the room more attractive a committee went to the greenhouse to buy inexpensive plants, while another group, under the direction of the art teacher, made colorful mats for the center of the tables.

When discussing the arrangement of the room the question arose as to where children should be seated. The members of the class felt that friends should sit together so that they could have a more pleasant time. They knew that cheerfulness at the table was important. It was observed later that children relaxed and ate more leisurely in this social atmosphere.

On their trip to the lunchroom the class noticed the cleanliness of the kitchen, the lunchroom, and the personal neatness of the cook. In discussing the importance of cleanliness, they emphasized the need for proper care in the handling of silverware and dishes by the serving committee. The rules which were listed by the class for all children to observe were: wash your hands before eating; use a napkin for a place mat; and clean up when you have finished.

Each day the school cook prepared one substantial hot dish. This was supplemented with food brought from home by the children. Menus for the school hot lunch were planned for the week, printed and sent home in advance. This helped parents to select foods that would make a well balanced lunch. Most children had fruit, a raw vegetable, sandwiches, and milk in addition to the hot food.

Children became aware of the need for the reduction of food waste.

When new dishes were prepared the children were encouraged to take small servings and then return for more if they wished. The committee insisted that each child try to eat all the food that he accepted. They became aware of other ways of reducing food waste, such as, taking orders accurately and eating all of the lunch that they brought from home.

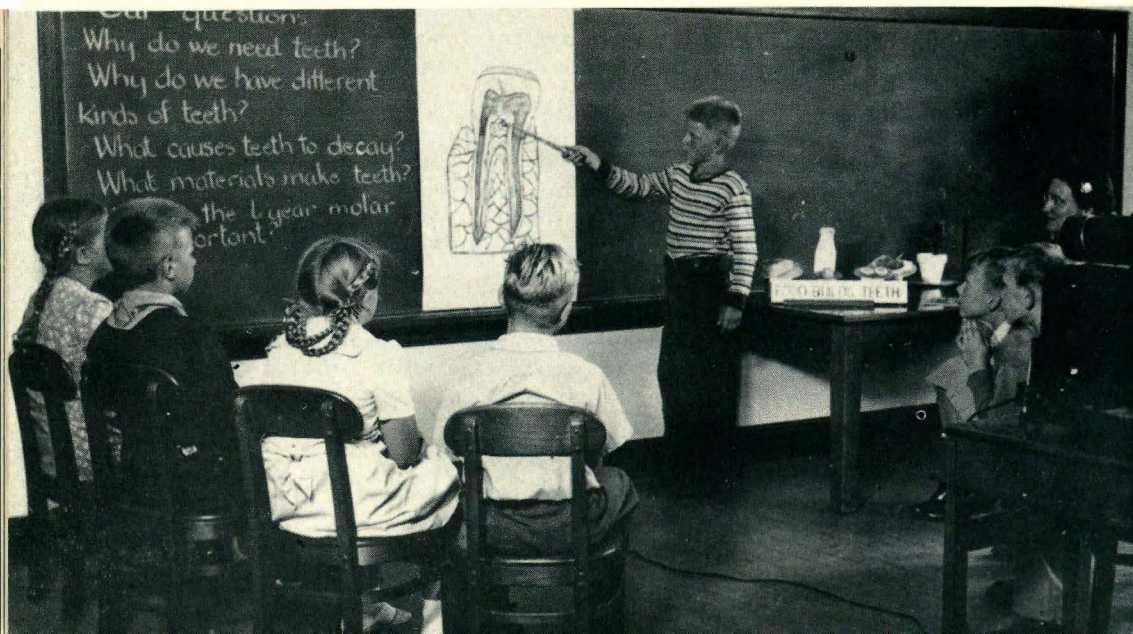
Each week the children evaluated the work of the committees. They also called attention to the good eating habits of children who ate slowly, chewed their food thoroughly and swallowed food before drinking. Children were encouraged to be courteous to each other, to talk quietly, and to enter and leave the lunchroom in an orderly way. Often these suggestions were the basis for reports given in other rooms and for making posters. Language, art, and arithmetic had real purpose through correlation with the program in nutrition.

● NUTRITION PROBLEMS STUDIED

As the children directed the lunch program some important nutrition problems developed. Why do we need food? What foods are essential to good health? How is food changed in the body so it can be used? Children were better able to understand the need for proper food as they observed the rat experiments, saw pictures of undernourished children and read widely. The timely use of films, food displays and simple experiments helped to make the related study meaningful. Films were previewed and evaluated by a committee of children and the teacher to select those that had material directly related to the study.

● SCIENCE RELATED TO FOOD STUDY

Many phases of a science unit on plant life contributed to a better understanding of nutrition. The concepts, that food is essential to life and that plants make food, were developed. Children learned that they



ate food stored by plants. They prepared an exhibit of seeds, stalks, leaves, roots and fruits that are used as food. Many of these were tested for their sugar, starch, or fat content.

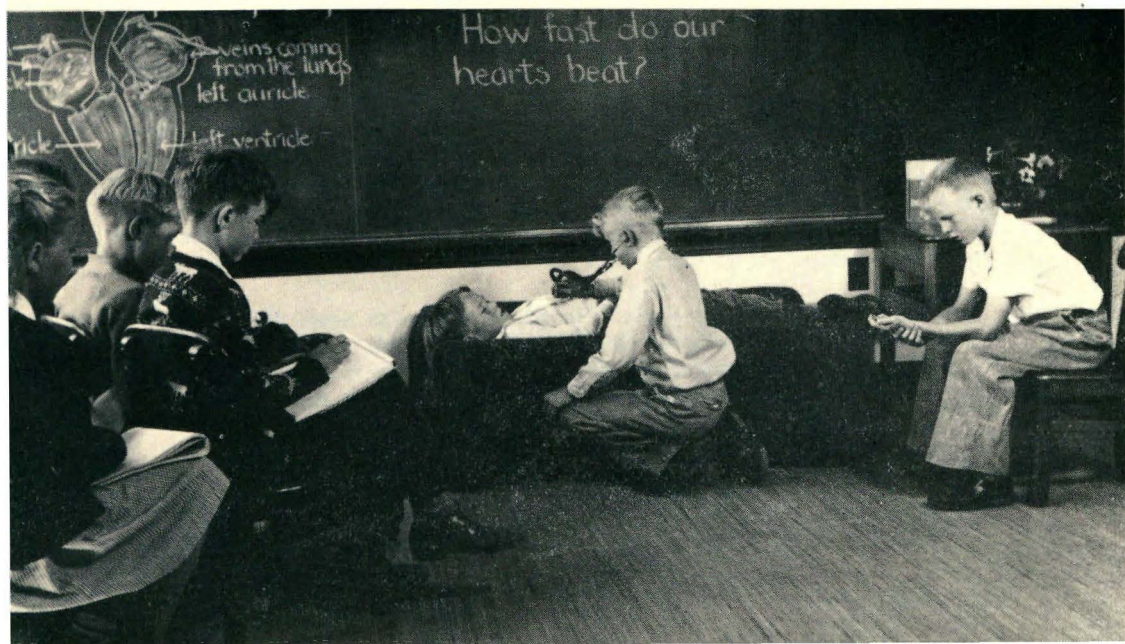
● PHYSICAL EXAMINATIONS AROUSE INTEREST

Examinations given by the doctor and the nurse showed the need of a better understanding of dental health and particularly for the care of the temporary teeth. When the class discussed the value of health examinations and the work of the doctor and the nurse they asked many questions, "Where are the six-year molars?" "Why are they so important?" "What foods should we eat to build strong teeth?" "Where is your heart?" "How large is the heart?" "What is a heart attack?" "Why do some people grow taller than others?"

From the children's questions and health examinations an intensive study of the teeth and heart developed. The children were encouraged to work in committees because of the range of interest in the class and the need for developing the ability to work together.

Each committee set up additional questions for study, gathered information, and organized their material to present to the class. The children who studied teeth made pictures to illustrate the important points in tooth structure, tooth metabolism, and tooth decay. As the children talked these illustrations were shown on the wall with an opaque projector. They discussed with ease and understanding the value of teeth, the kinds of teeth and their use, the proper care of teeth, and the importance of including foods in their diets that build strong teeth.

The children who were studying the heart and circulation enlisted the help of Professor Quigley, a member of the college science department. He showed them models of the heart and the body. They noted with interest the division of the heart into auricles and ventricles. Aorta,



septum, artery, vein, capillary, all became familiar words in their speaking and writing vocabularies. They saw where the heart was located and how the blood vessels carried blood to all parts of their bodies; the teeth, the tips of the fingers, and even to the heart itself. Their enthusiasm and interest carried over to children of other committees and on the day they used a stethoscope to listen to their hearts the entire class was invited to participate. Under Professor Quigley's direction the class counted the heart beat of a child as he lay down, sat up, stood up, and then after he ran around the block. The children's comments and subsequent discussion of the experiment indicated their understanding of the value of rest. Three important concepts gained and brought out in their reports were: the need for proper food to build muscles; the need for food to build blood; and the need for food to regulate the body.

● TOTAL ENVIRONMENT IMPORTANT

Maintaining a healthful physical environment, one in which the child can grow normally and make best use of his food, is the teachers responsibility. She must check the size of children's desks and chairs frequently to promote good posture. Adequate lighting as well as adequate food are important for the health of the eyes. When the teacher is talking to children she should avoid sitting or standing where they will have to face direct light. The heating and ventilation of classrooms must be regulated. The entire physical environment of the school should promote the development of proper habits and attitudes.

The emotional environment of the classroom depends upon the wholesome relationships of children with the teacher and with each other. All children need to have a feeling of "belonging" and of "being of worth". Group and committee solution of problems help to develop security. Each child shares in the planning, in accepting responsibilities, and in contributing to the success of the group.

TEACHERS UTILIZE WORKSHOP SUGGESTIONS

By Four Teachers in the Public Schools

I

Good elementary teachers become as enthusiastic collectors of pictures, stories, and illustrations as the most ardent collectors of stamps or coins. No magazine is safe from their scissors, no offer of free materials escapes their requests.

With a rich fund of stories and materials the intermediate grade teacher will supplement and stimulate the study of foods because she realizes that her children have arrived at the inquiring stage and at the beginning of hero worship. These children will be interested in knowing that spaghetti did not originate in Italy but in China and that oranges first came from China. When children are studying grains they will learn not only of the development of the reaper but of what George Washington Carver did in developing hybrids. They will become aware of the growing importance of peanuts and soy beans when they know that many useful items are made from these foods and that they are substituted for meat and milk in countries where these essential foods are lacking.

When considering how foods are preserved the results of Birdseye's observations on quick freezing will help the children appreciate how one man can initiate an amazing new industry. It will be news to them that canning originated in France in response to the offer of a prize for a good method of preserving food. They will study how food values are retained in canned and frozen foods and how our health has benefited. Some may have the desire to carry on feeding experiments with animals, some to make gardens, and others may wish to help with home canning.

Foods will become interesting if the origin and manufacturing can be made vivid. Stories which tell that ice cream originated in Italy 300 years ago and that the Greeks in New York made the first ice cream cones will arouse interest.

Stories and pictures which show the beginning of cheese and ice cream making should be compared with modern methods of making cheese, butter, ice cream, and evaporated milk. If these precede the visit to a creamery or milk products plant the children will have a good background for understanding what they see. After they have noted how the various nutrients are separated the children may experiment in the classroom, make butter and cheese, and learn more about their food values.

From all these experiences the children will become alert to developments and recent achievements in food production and preservation. They may also become interested in the improvement in health which has resulted from these scientific and industrial developments.

FRANCES EVANS,
Wenatchee, Washington
Grade 3

II

We teachers have had our eyes opened to our responsibilities for building the health of children in our schools. We have had the privilege of being shown how to improve our own food habits and how to help children improve theirs. In Miss Clanfield's second grade it was evident that when children learn about food, prepare it, and serve it in a pleasant social atmosphere, that healthful foods are eaten with enjoyment.

The possibilities in our "G. I." community are unique. Our children come from a large housing project which takes care of Boeing workers who have been brought in from different sections of the country. The population is floating. Mothers are working on different shifts. The markets are at quite a distance from many homes on the project.

The school is so crowded that morning and afternoon shifts have become necessary. One group is in school from seven-thirty until twelve-thirty; the other group starts at twelve-thirty and stays until five. The school lunch is available only to those children in the extended day care, not to our groups. Children, as well as the teacher, therefore need the lift that a lunch will give in the middle of a long session. They need to know how food will benefit them and that they may all need extra food to round out the day's diet. My plan is to arrange for a mid-session lunch period and provide for good nutrition learning along with social studies, language, art and arithmetic.

The first step will be to make a survey to find out what foods are most lacking in the children's diet. We will then take those findings to the principal and nurse and use various methods of getting parents' cooperation. The children could write letters to their parents and parents could be informed in other ways of progress being made. In our area parent meetings are practically impossible.

In our planning we shall need to take into consideration the limited facilities for storing and preparing food and washing dishes. The foods we serve must be easily and quickly prepared. Because of limited cupboard space we will use paper cups and napkins and small sections of wax paper instead of plates. Many "finger foods", as well as fruits, fruit juices and milk, will be served. Children will learn to wash their hands well before eating. The food will be purchased and prepared by a committee of two or four children and served buffet style on an attractive platter or plate. A clean-up committee will dispose of refuse in large paper sacks to eliminate extra janitor service. We hope that any of these habits will carry over in the life of each child.

MRS. BELLE S. COAN,

Renton, Washington

Grade 4

III

How to make health teaching more effective is my problem; the workshop has helped in pointing out the solution. Since many of the children in my school leave home on the early bus and eat little breakfast, I feel the necessity of serving a mid-morning lunch.

The educational opportunities and health benefits from such a lunch have been clearly demonstrated by the second grade teacher in the College Elementary School. Having discovered that her children were not getting fruits for breakfast, Miss Clanfield decided that studying fruits, preparing and serving them attractively, would interest children and encourage them to eat and like many kinds.

A mid-morning lunch can well make up dietary lacks found by the teacher and offers educational material as well. When a teacher wishes to encourage the eating of more fruits and vegetables, such foods as tomato juice, vegetable sandwiches, carrot strips, or a simple salad rolled in lettuce leaves, are ideal for the mid-morning lunch. If an electric hot plate and some equipment are available, applesauce, stewed prunes or cocoa can be prepared by the children as a part of their school experience.

Cooperation will be secured by inviting parents to school to share in planning and carrying out this activity. Parent support will be invited and in some cases donations of food may be solicited.

The children will study about the production and the preparation of these foods, and their values in their diet. As children are served, pleasant conversation, courtesies, and enjoyment of the food will be encouraged. Committees will shop for the food. All will have arithmetic experience by figuring the amounts, the costs of servings, the doubling of recipes, and in solving other related, practical problems.

Through this variety of experience in carrying out the mid-morning lunch plan, I hope the children will enjoy eating correct foods. It is hoped that other valuable learnings will also be inherent in the activity. I feel that this project will offer many opportunities for learning to work together, to assume responsibilities, to avoid waste, and to practice cleanliness.

MRS. EXIE M. BUNKER,
Auburn, Washington
4th Grade

IV

Arithmetic need not be as dry as the dust bowl if important, practical, local problems are brought in to enrich the soil. Since the cost of food is of interest to all, many problems can center around it. By bringing the personal interest of everyday living into the arithmetic class, appreciation of practical, social problems may be achieved. The arithmetic work could well include problems that show the comparative cost of different kinds of foods which have the same essential nutrients, and how processing and preparation increase the cost of raw foods. This might be illustrated through the study of wheat from its production on the farm through the manufacturing processes into flour and cereals.

Children might like to figure the comparative cost of serving a roast or macaroni and cheese to a family of five. They might also wish to compare the cost of fresh vegetables in season with the cost of equal amounts of frozen, canned, and dried vegetables. A committee from the arithmetic class might secure information from the cook as to the cost of various items involved in the serving of food such as wages, breakage and waste. Using this data the class might figure how much is being spent for actual food and how much for labor. They could compare the cost of different types of lunches. Through these problems children may come to realize that people of low income may have an adequate diet through the wise selection of foods.

MRS. MARJORIE EVANS,
Winthrop, Washington
Junior High School

SUGGESTIONS TO TEACHERS

Edna Martin,
Director of
Home Economics
Seattle Public Schools

Vera Alderson,
Assistant Director
of Home Economics
Seattle Public Schools

Ruth Palmer,
Field Nutritionist
American Red Cross

Any nutrition program should be based on the actual needs of children. These needs can be discovered through observations made by teachers and nurses, cumulative health records, children's diet records, and physical examinations.

● USE OF SURVEYS

Actual needs may be readily discovered by the teacher using informal means. In one second grade, the children drew pictures of what they had for breakfast. Through an analysis of a series of such pictures the teacher was able to see where emphasis needed to be placed.

● SELF-PREPARATION

The elementary teacher must have a constructive attitude and a firm conviction that nutrition teaching is a vital part of the elementary educational program. If she is to do an effective job, she must have accurate nutritional concepts and must also realize that what she herself does is more potent teaching than what she says. Her own food habits should reflect sound nutritional knowledge and practices. Accurate nutritional concepts may be gained through:

- (a) Taking a basic course in nutrition and applying it to the elementary school program, such as extension courses from colleges or universities, or the Red Cross nutrition course.
- (b) Attending a nutrition workshop or conference.
- (c) Participating in in-service training.
- (d) Keeping up with current facts in pertinent literature.
- (e) Calling on specialized and professional persons to supplement teachers knowledge when the occasion demands it.

● ADAPTATION TO CHILDREN

The teacher must decide on fundamental objectives, set the stage for children's activities and plan for children's participation in the program. In a series of lessons observed in the second grade of the College Elementary School, the teacher stressed the necessity of having a good breakfast in order that the children might feel well and have plenty of energy for work and play. A survey of their breakfasts had revealed that many children in the group did not have fruit for breakfast and that several had only toast and milk.

Through discussions of a movie, which showed how good food

builds good health, and observations of an experiment with white rats, the children were led to see that nutritionists had good reasons for saying that certain foods were good for growing children. Thus, they were ready to accept the good breakfast pattern which the teacher built with them. They had had two previous lessons on whole grain cereals.

The teacher's objective for the lesson described here was to strengthen the children's understanding of what constitutes a good breakfast. The teacher's objectives included:

- (a) Strengthening the children's understanding of what constitutes a good breakfast.
- (b) Guiding the children to plan for a mid-morning lunch period.
- (c) Developing the idea that later the class might cook and serve a breakfast which was to be the culmination of the breakfast unit.

The lesson began with the teacher's remarks to the children:

Teacher: You people look wide-awake and full of energy this morning. What did you have for breakfast?

Barbara: Fruit!

(The teacher writes "A GOOD BREAKFAST" on the blackboard and tabulates children's responses as given.)

Monte: I had a whole grain cereal.

Nelson: Shredded wheat.

Betty Lou: I had toast.

Teacher: What kind of toast should you have to have a whole-grain cereal?

Donald: You'd have to have bran in it to get whole wheat, so you must have dark bread.

Teacher: Do you remember that last quarter we went to the bakery? What did the boy tell us they added to white bread?

Arthur: They put in vitamins. They called in enriched.

Teacher: What else do we need for a good breakfast?

Children (in chorus): MILK! (This is added to the list.)

Teacher: What else might we have for a good breakfast?

Elsie: Eggs!

Teacher: An egg for breakfast three or four times a week is good for us, too. Now this list makes a good breakfast pattern: fruit, whole grain cereal, toast, milk, and sometimes eggs.

Teacher (indicating Dairy Council Food Models): Bill, will you show us a good breakfast? We can check your breakfast with the good breakfast pattern we have on the blackboard.

(Bill selects models of milk, prunes, and toast from the table and placed them in the pocket chart.)

Teacher: Is this a good breakfast?

(Donald walks up and adds cooked oatmeal to the breakfast.)

Teacher: Why did Donald add oatmeal to Bill's breakfast?

Jane: So there'd be a whole-grain cereal.

Teacher: Toast may sometimes take the place of a whole-grain cereal, but usually we want some cereal, too.

Teacher: (Removes models from the chart.) Elsie, would you like to show us a good breakfast?

(Elsie, who is on a special diabetic diet, chooses: milk, apricots, cornflakes, scrambled egg on toast.)

Nancy: Elsie must have been hungry when she chose that breakfast!

Betty Lou: It is a big breakfast!

Vern: It looks good!

Tony: It has cereal.

Betty Lou: Elsie will grow strong because she chose a glass of milk.

Teacher: What else makes it a good breakfast?

Jane: Fruit!

Teacher: (Removes cards.) LeeLee, I'd like to have you choose a breakfast.

(LeeLee chooses shredded wheat.)

Teacher: Is that a whole-grain cereal?

Children: Yes!

Donald: I read on the box that it was made from whole wheat.

(LeeLee chooses banana, orange juice, bread and butter.) (She sits down ignoring the displeased murmuring on the part of the children because she has omitted milk.)

Teacher: Do you think LeeLee has chosen a good breakfast?

Betty Lou: She'd better have some milk instead of so much fruit.

Teacher: You probably would want milk with that breakfast. I think you are learning to choose a good breakfast.

Teacher: Would you like to plan a real breakfast for us to cook?

Let's look in our recipe books and see if they will tell us some other things we might cook. (Passes out "My Own Cook Book" from the Dairy Council.)

Nancy: Applesauce.

Betty Lou: How about having cocoa?

Teacher: Nancy, could you read the recipe for applesauce?

(Nancy reads.)

Teacher: Let's talk about the applesauce recipe for a minute. Do you think the shopping committee should buy the apples today?

Children: Yes!

Teacher: How many apples do you think the committee should buy?

Barbara: Two.

Levi: Sixty-two.

Teacher: Why do you say sixty-two? (Children seem unable to think how many apples they will need.) There's someone here who can help us. Let's ask Miss Michaelson.

Miss M: Probably half an apple per child would be enough for lunch.

Vern: Half an apple! (Children are obviously distressed at the idea of half an apple.)

Teacher: I think one apple apiece sounds better to us. Shall we have the committee buy one apple apiece?

Children: Yes! (Rachel counts all who are in the room and the shopping committee is instructed to buy thirty-two apples.)

Teacher: Betty Lou, can you tell us about the cocoa recipe you have found?

Betty Lou: (Reads the recipe for cocoa paste.)

Teacher: See if you can find out how we might use cocoa paste. Nancy, what is cocoa paste used for?

Nancy: To make cocoa. Can we make the cocoa paste today and use it tomorrow?

Teacher: I want you to think now what you want the shopping committee to buy for tomorrow.

Nelson: We ought to have oatmeal. Here's a recipe for it.

(Teacher and children approve of Nelson's suggestion.)

Teacher: The shopping committee will have to come back this afternoon to go to the store. Donald is chairman of the committee. Donald, do you think your committee can have the apples here for us to cook in the morning?

(The children talk excitedly for a few minutes about the plans for the next day and then get ready to have a finger painting lesson.)

This lesson was one of a series which showed how important the actual preparation and serving of food is in the learning process. It should be noticed that plans were based on real needs of children as found by the teacher. Often insight into needs can be gained through the work of a School Health Council.

COMMUNITY OBSTACLES TO THE SCHOOL'S NUTRITION PROGRAM

Jennie I. Rowntree,
Professor of Home Economics
University of Washington, Seattle

Teachers with intuition sense the unseen but underlying obstacles in their communities that block change in children's habits and practices. Poverty and lack of knowledge are often blamed for undernutrition when ingrained attitudes are responsible. Much discouragement could be avoided and much more accomplished if teachers and other reformers would first study what viewpoints must be overcome before their advice about healthful living practices will be accepted. It is not easy to teach new facts; it is even more difficult to teach about food and have the advice accepted and applied when such ideas are diametrically opposed to the things done at home.

For example, in one region teachers will find that people believe the food their fathers ate is good enough for them. These people regard health as something bestowed on us by a kind providence in no way affected by food choices. In another area distorted notions, food faddism, and unscientific attitudes may be rampant. In a third region, people may feel the importance of food but be discouraged or irresponsible and expect some local or government agency to insure dietary adequacy for their children.

The diagnosis of whether a community suffers from inertia, faddism, or a chronic case of the "gimmies", or whether its attitudes are healthy and scientific can of course be made within the school. If it is evident that the community is untouched by the newer nutritional knowledge, if meals on childrens' menu lists, in lunch boxes, and elsewhere look like those served forty years ago, people must be taught that science has shown the way to better health and technological developments have changed our food supply. Unless convinced of the reasons for and the desirability of change we all remain as we are.

People must be made more aware of the possibilities of better health through improved food. The amazing decrease in the infant and maternal death rate and the twenty years' increase in length of life that has occurred in the last half century can be cited as evidence both of what science has done and what it can do. Better health at all ages is the goal for the future, not just "years to life" but "life to years."

Those who are resistant to change must realize that meals seemingly similar to those served forty years ago are quite different because foods have changed. The processing of grains; pasteurizing and evaporating of milk; the preparation of luncheon meats; canning, freezing and drying of vegetables and fruits have lessened the nutrient value while preserving the foods and making them universally available. Pasteurized and evaporated milk is safe but almost devoid of vitamin C. Cereals ready to eat have a poorer quality of protein and fewer vitamins to their credit than did the bulk cereals of bygone days. Processed vegetables are quite

different in vitamin content than those brought directly from garden or root cellar.

Those who resent the emphasis on protective foods today, particularly the vegetables and milk, must have it brought to mind that changes have occurred in dietary habits. In their youth they had meat and potatoes three times a day, consumed more eggs, and ate a larger quantity of a more nourishing type of bread. Today we eat more sugar and fats, less bread and potatoes, and have lost protein, minerals and vitamins from the change. Furthermore, our forebears, not having labor savers and automobiles, had to be more active physically, and consequently ate larger quantities of food and got more minerals and vitamins than we today.

That something is wrong in our modern diets is evident from the prevalence of tooth decay. Not only the startling figures from army examinations but the facts cited by Winslow in a recent Public Affairs Pamphlet, that Americans are paying half as much to dentists as to doctors and then only one-fifth of us are getting adequate dental care, makes us realize that dietary improvement is essential. It is increasingly apparent that our high consumption of sugar is in part responsible. Mineral lacks are another factor of importance in tooth decay. Better food, however, is a more potent force as a preventive than as a cure.

Unscientific attitudes are the worst obstacles to health promotion. Human beings are unwilling to believe that "as they sow, that shall they also reap." Each hopefully expects to be the exception to the rule, expects doctors to offset with a pill or prescription the condition that has been years in the making. Obesity, chronic indigestion, low resistance and lassitude rarely appear suddenly, but have been the gradual result of a way of life. Nor are they miraculously cured with twenty vitamins, two've minerals, or the "new wonder" drugs. No teacher can make a bigger contribution than to encourage the relating of cause to effect.

Another perverted attitude one may find in parents is evidence of a feeling of social superiority if they or their children are nervous, delicate or frail. That teachers regard nervousness and low resistance as the result of weak heredity, poor handling, or other bad luck has never entered their minds.

Real faddists are more beset with fears. They worry about incompatible combinations, abstain from "devalitized" cooked foods or refrain religiously from one kind of food. The faddist endeavors to be scientific but is unduly gullible because he was never taught to weigh evidence. Education could have done much for him.

Lastly, there are those who realize that food can do wonders for children but make little effort to provide it. They are the poor cooks, who buy expensive ready prepared foods never realizing they are paying for services, not food values. They expect the school to feed their children and correct dietary inadequacies.

The evidence of a fairly large number of children from such homes led to the school lunch program. It was rightly felt that all children should be in condition to benefit from their schooling. Of late the school

lunches have been taking on educational responsibilities so that all children, not just the physically needy may benefit. All parents should realize this.

Teachers who see what attitudes dominate the community are not only better able to make health teaching effective, but they find life much more entertaining. Teaching assumes the aspects of a game. Subtly overcoming false attitudes requires tact and ingenuity. Sometimes parents can be led to play double roles before they are completely sold on the idea. For example, if too little fruit is eaten by the children, parents can be asked to contribute to a mid-morning fruit fund and can also be asked to inspire children with their examples. Parents must see that if children are to like fruit juices, they must choose juices in preference to soft drinks and stimulants. If adults realize that what they serve at banquets, parties and company dinners, has a greater impression on children than anything teachers say or text books advocate, they would realize the importance of example and accept their responsibility. Schools err if they try to play a lone hand.

If the health promoting qualities of food have been underestimated, an evening program at which the parents see the results of a diet experiment on rats, or hear the county extension agent explain the effects of food on farm animals and the possibilities, through improvement, of human diets, may awaken scientific interest.

Parents' attitudes must never be criticized, never ridiculed but every available means used to convert them to a scientific basis. Cooperation is easy to get when parents have a complete understanding of the goals and when they realize that they play a major role in the schools' endeavors.

SPECIAL CASES RECEIVE MEDICAL ATTENTION

E. E. Cutts, M. D.,
Head, Maternal and Child Hygiene
and Crippled Children's Section
Washington State Department of Health

Clare M. Hartnett,
Nutrition Consultant
Washington State Department of Health

● OBSERVATIONS AND SCREENING FOR SELECTION OF CASES

In every school there are a few children who give evidence of nutritional failure, such as marked tooth decay, poor posture, deviation from normal muscle development, and poor food habits. The teacher who is aware of such deviations will call the nurse's attention to these children and the nurse in turn will select those who obviously need a doctor's attention. For the workshop clinic, six cases had been selected from the College Elementary School by the teachers and public health nurse.

● MEDICAL EXAMINATION

At the clinic, which was observed by the members of the workshop, the pediatrician not only evaluated the nutritional status of children but used the individual patient as a basis for discussion to point out to the teacher some of the individual health problems as well as school health problems.

● PARENT EDUCATION

Parents were present at the time of the examination. This is essential because it offers opportunity for parent instruction and enables the doctor to discuss the child's problems as the parent sees them and to obtain further history.

The pediatrician frequently pointed out to the parent, the relationship of unsatisfactory food intakes and poor food habits to the physical findings of the child. A parent-nurse-nutritionist conference as a follow-up was often suggested. Frequently the parent agreed to keep a one-week record of the child's actual meals to serve as a basis of discussion. The nutritionist then evaluated these records as a basis for follow-up work. Reports of these parent contacts were made to the workshop with explanations of necessary follow-up procedures by the local health department working with teachers and parents.

● POSSIBLE HEALTH PROGRAMS

The pediatrician pointed out to the workshop observers that the ideal health program would only be accomplished when every child would be examined periodically by a pediatrician or a general practitioner who is interested in and trained to diagnose the seemingly well or mildly ill child.

As an alternative plan, public health nurses and local physicians interested in the health of children, might take additional training from the standpoint of evaluating the health status of children. After the teacher has selected those children whom she thinks are most in need of medical care, they would be discussed with the public health nurse. The nurse would then refer selected cases to the physician for complete physical examination and necessary laboratory work.

A third alternative would be an examination of all children by a school physician who uses health records and questionnaires to obtain a picture of the child. Where one school physician attempts to examine hundreds of children without suggestions from nurse and teacher, the evaluation of the history and the examination of the child may not be carefully done. The diagnosis is far more difficult than when preliminary screenings have been made.

● RECOMMENDATIONS

With the present acute shortage of medical personnel we can hardly expect to achieve the ideal. It is hoped that the school, the local health department, the medical profession, and teacher training institutions will recognize the tremendous need for an adequate school health program and assume their attending responsibilities for its realization.

PARENT-TEACHER RESPONSIBILITY IN THE ATTAINMENT OF HEALTH

Ethel M. Thompson,
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Health today means not the mere avoidance of illness, but rather a positive quality of life. Growth and development of our well cared for children proceed not merely toward so-called adequate health, but rather toward the attainment of an abundant and vital health.

● THE HEALTHY CHILD

The healthy child is a cheerful, happy child. He has the appearance of well-being with a radiant glow and that warmth in color of the body which is the charm of childhood. He has a ready-to-go-ness quite different from the tension of the nervous and fatigued child. His posture is erect, suggesting poise, strength, and endurance. It suggests the use of all parts of the body in proper balance with good development not only physically but emotionally and spiritually as well. He is forever active during all of his waking moments. His eyes are clear, hair smooth and lustrous, and teeth good. His skin is firmly attached to the underlying muscle. His feet have good arches. His weight is optimal for his height and weight.

● HIS GROWTH RECORD

The modern mother and father of today keep an accurate record of the child which contains significant information of growth. Formerly the mother jotted down in her leisure moments certain items in her baby book of special interest such as his birth weight and height, color of eyes and hair, first spoken word and date of first smile, but this book of yesterday has now grown into a more informative record of developmental growth from birth through adolescence. Such books containing directions for use and measurements to be taken are available at many of the larger institutions of child welfare and can be obtained from certain magazines which are published for parents interested in childhood and growth. These records when completed have not only scientific but historical interest as well. If properly kept they can become invaluable as a family possession, especially when the child himself becomes an adult and establishes a family.

Such a record of development, however, cannot become of real value merely through interest on the part of the parents nor by casual observation which may be spasmodic and hurried. It should be the outgrowth of the regular periodical physical examination obtained at a health clinic and follow-up interviews with the examining physician. Such procedure will quickly reveal deviation from that which is expected of the healthy child.

● CRITERIA FOR EARLY RECOGNITION OF NUTRITIONAL FAILURE

Criteria used in early recognition of deviation from expected devel-

opment in health should be more widespread and better established. This is especially true for determination of early deficiency due to nutritional failure in infants and children. During these years the demands of growth are great. In 1942 a Committee on Medical Nutrition of the National Research Council reported that early nutritional failure is probably far more prevalent among the population of the United States than is generally supposed. At that time this committee published in the Journal of the American Medical Association, Volume 118, February 21, 1942, pages 615 to 616, a tentative list of clinical criteria for use in examining children. It was believed that such objective methods would yield data of social, economic and public health importance.

These criteria of the Committee of the National Research Council are such that most of them can be observed by parents, teachers, nutritionists, and nurses. The committee places the responsibility for their early recognition squarely upon this group of people with whom the child is most closely associated. Among the criteria listed the following symptoms of early nutritional failure may be observed during the elementary school years.

● SYMPTOMS TO BE RECOGNIZED BY:

1. Parents or teachers.

- (1) Lack of appetite,
- (2) Failure to eat adequate breakfast,
- (3) Failure to gain steadily in weight,
- (4) Aversion to normal play,
- (5) Chronic diarrhea,
- (6) Pain on sitting and standing,
- (7) Poor sleeping habits,
- (8) Backwardness in school,
- (9) Repeated respiratory infections,
- (10) Abnormal intolerance to light, photophobia,
- (11) Abnormal discharge of tears,
- (12) Bad posture,
- (13) Sores at angles of mouth, cheilosis.

2. Nurses or nutritionists.

- (1) Lack of subcutaneous fat,
- (2) Wrinkling of skin on light stroking,
- (3) Pal'or,
- (4) Rough skin, toad skin,
- (5) Rapid heart,
- (6) Square head, wrists enlarged, rib beading,
- (7) Serious dental abnormalities.

3. Physicians only.

- (1) Poor muscle tone,
- (2) Hemorrhage of the newborn, vitamin K,
- (3) Red tongue,
- (4) Vincent's angina, thrush,
- (5) Corneal and conjunctival changes—slit lamp.

A record of the physical examination together with specific recom-

mentations made by the physician, is usually on file in the office of the school principal for reference by the teacher. Special precautions may be indicated here which should not be neglected.

● MEASUREMENTS IN HEIGHT AND WEIGHT

Growth in height and weight should be ascertained carefully every year or possibly half-year by the parents and teachers. The annual increment in inches and pounds should be compared with that obtained on large groups of children of the child's own age. Not only should expected average gain in height and weight be known but also the range in growth as determined by individual children comprising the group. Seldom does the healthy child's annual growth actually coincide with that of the group average but it usually falls within the range of the group. If this does not occur, there is cause for investigation of the child's physical condition.

There are several standards commonly employed today for predicting appropriate weight and annual increase in weight. Older tables were based upon measurements of weight, height and age only. Today it is well recognized that determination of appropriate body weight as an index of nutrition should also take into account nature of bony framework and body structure. Large skeletal structures tend to be broad and to support heavy muscle tissues while small skeletons tend to be slender and to have light muscle tissues. The individual having the heavier bony structure should weigh more than the one having the lighter. The Pryor Width—Weight Tables take into consideration two body measurements, the thoracic or chest and the bi-iliac or hip width. The hip width was selected as a measurement which is not variable with posture or respiration. These two dimensions are measured by means of sliding arm calipers. Calipers, tables and directions for use can be obtained by writing to the Stanford University Press, Stanford University, California.

When weighing children it is important that a balance type of scale be used which can be adjusted for accuracy before use each time. The child should stand in his stocking feet in the center of the balance platform with his back to the scale. If actual weight is 98 pounds and appropriate weight is 117 pounds his deviation is minus 16.2% ($117-98 \times 100$).

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Height should be measured by means of the stadiometer; or two carefully adjusted yardsticks. In stocking feet, his heels and spinal column should touch at all possible points. All measurements should be carefully checked by a second person.

● RESPONSIBILITY OF PARENTS AND TEACHERS

We should bear in mind the fact that the most effective contacts of the child are in his immediate and daily environment. Only as children are observed by competent and understanding parents working in cooperation with an alert and inquiring teacher can the well rounded picture of the child's environment be visualized. The question is not where is he now but where is he going? Is it in the right direction? What development did he make last year; what can we expect during the coming

year; not, how does he compare at this particular time with his special age group?

The teacher asks herself the following questions. Why does the child show unusual fatigue which appears in mid-morning and mid-afternoon? Why is he so often late to school? Why so often absent? Why does he have frequent colds? Why is he so listless and inattentive? The teacher will see how these conditions affect the child's work but the parent may not. On the other hand, the parent may be able to assist in determining causes, once he realizes they exist. Only by making the picture complete through an interchange of ideas can constructive action be taken. Parents and teachers, because of their close association with the child, should assume full responsibility for early recognition and correction of nutritional deficiencies. Together they can make the most of the child's potentialities and determine that he shall live his life richly and to the fullest extent.

USE OF INSTRUCTIONAL AIDS

A noteworthy point of view reiterated again and again by workshop participants and constantly exemplified by the teaching in the demonstration classes, related to the use of illustrative materials. It was brought out that good teaching not only calls for a great variety of instructional aids but also for a sense of timeliness in their use.

● POSTERS AND CHARTS

Posters and charts often serve the purpose in stimulating interest but are of low value unless directed toward a definite end. They should be used only when they serve to emphasize the specific point that is being made. For example "A Guide to Good Eating" hung on the wall as a decorative feature has no teaching value but when it is used at the right moment in a discussion to explain food needs, the child grasps the idea of a well varied diet.

● ORIGINAL ILLUSTRATIVE MATERIAL MADE BY CHILDREN

Posters and charts, or photographs of drawings and diagrams made by children or pictures of outstanding things they have seen after visits to the bakery, dairy, and other community industries are valuable.

● FILMS, FILM STRIPS, SLIDES, AND PICTURES TO BE USED IN OPAQUE PROJECTOR

A film used merely to entertain or to give irrelevant information of little use to the child at the time, has limited function. A film or film strip should be used when it connects directly with the learning situation and when children have been properly prepared and have questions about the production, manufacture, or use of the food being studied. A film may be used to develop interest, to answer questions, to clarify thinking or to develop clearer concepts. It is not always necessary to use the whole film, but only sections that relate directly to a specific purpose. The same film may be used at different times for different purposes.

The opaque projector may be used by children to project their own drawings, or to enlarge and show for class study charts, diagrams and maps from books and magazines. This is particularly valuable where an individual or committee project is shared with the whole group.

● FOODS AND FOOD MODELS

When children actually participate in the preparation and eating of foods as part of their classroom activity, good food habits are readily built and strengthened. Food models may be used to discover eating habits of children, to help in meal planning, and to score the day's dietary. When these aids are used, discussion should be directed to,

and emphasis should be placed upon, what the food or food model is to illustrate.

● SCORE CARDS AND RATING SCALES

A score card, such as the accompanying one, may be used as a means of testing the adequacy of the meals before studying foods. It could be scored by children and handed in to teacher without comment. The score card is for the teacher's information. Several weeks later after studying food needs, the score may be used for the benefit of children.

MY FOOD RECORD

Date.....

Name.....

Directions: List each food separately. Tell if you had 1 or 2 helpings.
A helping or serving is $\frac{1}{2}$ -cup or 4 tablespoons.

Using Food Score Card
My Score Is:

Breakfast	
Lunch	
Dinner	
Total Score for the Day's Meals	

Hours of sleep..... Buy all food: Yes..... No.....

Hours of mealtime..... Family garden: Yes..... No.....

Appetite: Good..... Fair..... Poor..... Home canned food supply: Yes..... No.....

Eating between meals: Yes..... No..... Eat at home..... at restaurant.....

MY FOOD SCORE

(For Elementary School Children)

Name.....

Date.....

		Points	My Score
Milk		1 cup milk 8 2nd cup milk 8 3rd cup milk 8	
Meat or Meat Substitute		meat, fish, poultry, cheese dish, egg dish, dried bean or pea dish, 2-slice peanut butter sandwich 1 serving from these groups 12 2nd serving from these groups 12	
Eggs		½-egg (as in custard, souffle, etc.) 3 1 egg 5	
Fruits and Vegetables	Citrus Fruits Tomatoes Melons Strawberries	1 serving 7	
	Green and Yellow Vegetables	1 serving (at least ½-cup) 7	
	Potatoes	1 medium 7	
	Another Fruit or Vegetable	1 serving (at least ½-cup) 5 2nd serving 5	
Bread and Cereal		1 slice bread or 1 serving cereal 4 2nd serving 4 3rd serving 4	
Butter or Fortified Margarine		used only in cooking 2 2 servings 4	
		ADD	
If I didn't eat breakfast, I'll subtract		10 points	
If I had candy or pop between meals, I'll subtract		10 points	

Excellent, 93 to 100; Good, 85 to 92;

Fair, 75 to 84; Poor, 74 or Less

My day's score is.....

My rating is.....

NUTRITION KITS FOR ELEMENTARY SCHOOL

● FOR ALL ELEMENTARY TEACHERS

A Program of Nutrition Education in the Elementary School, Bulletin 27, Connecticut State Department of Education, Division of Instruction, Hartford, March 1943, 15c.

Nutrition Guide for the Home Front, by Jennie Rowntree and Betty Hawthorne, University of Washington Extension Series No. 12, Seattle, 1942, 25c.

The Road to Good Nutrition, by Lydia J. Roberts in collaboration with members of the Children's Bureau Staff, Superintendent of Documents, Washington 25, D. C., C. B. Pub. No. 270, 1942, 10c.

Food Conservation Education in the Elementary School Program, War Food Administration, U. S. D. A. and U. S. Office of Education, Federal Security Agency, N. F. C. 13, Office of Information, U. S. D. A., 1944, free.

Overweight and Underweight, by E. Neige Todhunter, University of Alabama, University, Alabama.

Food and Care for Good Dental Health, 1943.

"Your" Guide—How to Use It, 1943.

Do Your Children Get Enough Sleep? 1944.

Washington State Dairy Council, White Stuart Henry Building
Seattle, Washington

Nutrition Notes, published by The Nutrition Bureau, Community Service Society, 105 E. 22nd St., N. Y., 10, 50c a year.

Nutrition for You by Walter Wilkins, M. D., Ph. D., and French Boyd, B. S., Lily-Tulip Cup Corporation, Los Angeles, California, 1943.

Good Food, a Tentative Program for Learning Experiences in Foods in the Elementary School, Grades I-VI, prepared by Thyrza A. Sperry, Supervisor, Washington State Nutrition Councils Nutrition Project, War Food Administration, U. S. O. Office of Education, Washington, D. C. Reissued June, 1945.

● FOR LOWER GRADES

Vegetables to Help Us Grow, a Nutrition Unit for 1st, 2nd and 3rd grades of the Elementary School, Rose and Bosley, Bureau of Publication, Teachers College, Columbia University, N. Y., 1941, 35c.

The Lucky Twins by Charlotte Thomas and Marie Halbert, Bureau of School Service, University of Kentucky, Lexington, 1941, 25c.

Breakfast Card.

My Own Cook Book.

When I Grow Up by Edith E. Maddox.

A Happy Day.

Washington State Dairy Council, White Stuart Henry Building
Seattle, Washington

● FOR INTERMEDIATE GRADES

Our Cereals, a Nutrition Unit for 4th, 5th and 6th grades of the Elementary School, Rose and Bosley, Bureau of Publication, Teachers College, Columbia University, N. Y., 35c.

Feeding Our Teeth, a Nutrition Unit for the 3rd and 4th grades of the Elementary School, Rose and Bosley, Teachers College, Columbia University, N. Y., 30c.

Hello South America by Mildred Celia Letton.

Cheese is Made That Way by Laura Oftedal.

Packed Lunch, and Dinner Score Cards.

Washington State Dairy Council, White Stuart Henry Building
Seattle, Washington

The Doctor is Coming "Let's Do It Now" Series, Publication Committee, West Georgia College, Carrollton, Georgia, 1944, 15c.

Let's Cook Lunch, "Let's Do It Now" Series, Publication Committee, West Georgia College, Carrollton, Georgia, 1944, 25c.

Hints to People Who Handle Food Leaflet, Mississippi State Board of Health, Jackson, Miss.

● FOR UPPER GRADES

From Wheat to Flour, 1943.

Blackboard Lessons on Food, 1942.

Wheat Flour Institute, 309 West Jackson Blvd., Chicago

Facts About Teeth and Their Care, National Dental Hygiene Association, 934 Shoreham Building, Washington 5, D. C., 10c.

● NOTE

A few of the above kits will be available for distribution. If interested, write to Miss Helen Michaelsen, Central Washington College of Education, Ellensburg, Washington.

WORKSHOP REPORT ON HEALTH AND

SUGGESTIONS FOR CLASSROOM TEACHERS FROM



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