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**THE
SCHOOL LUNCH
PROGRAM**



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FOREWORD

This bulletin is written for the purpose of helping superintendents, principals, and other persons working with the school lunch to inaugurate and maintain a good school lunch program as a part of the total educational program. An attempt has been made to show the need for a school lunch program and to give help on problems incurred in the operation of it. The problems dealt with in this bulletin are managing and financing the lunch program, selecting and equipping the lunch room, planning menus, and maintaining good health standards and sanitary conditions in the lunch room.

JOHN W. BROOKER,
Superintendent of Public Instruction

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WHY HAVE A SCHOOL LUNCH PROGRAM

America needs people with sound bodies and alert minds for a nation is no stronger than its people. The importance of nutrition education to the health of the nation is being increasingly recognized. Schools can make a great contribution by improving the health of school children. The health of a child affects the quality of school work that he does. A malnourished child has less opportunity to profit by education than a well nourished child. Dr. Thomas Parran, Surgeon General of the United States Public Health Service, says:

“We are wasting money trying to educate children with half-starved bodies. They cannot absorb teaching. They hold back classes, require extra time of teachers, and repeat grades. This is expensive stupidity, but its immediate cost to our educational system is as nothing compared to the ultimate cost to the Nation. Something like 9,000,000 school children are not getting a diet adequate for health and well-being. And malnutrition is our greatest producer of ill health. Like nearly fresh fish, a nearly adequate diet is not enough. A plan to feed these children properly would pay incalculable dividends.”

A good school lunch program will contribute to the general health of children by providing foods which are needed for energy, for regulating the body processes, and for building and repairing body tissues, and by developing good food habits. Now that many mothers are working away from home, children do not get the carefully planned and prepared meals even though there may be more money in the family for the purchase of nutritious food. In some families the increased cost of food and the rationing of food makes it difficult for mothers of limited background to provide the nutritious meals that their children need. Even in the homes of families of higher income, many children are malnourished because of poor food habits.

The school lunch should be a vital part of the total school program and should not be considered just a feeding program. Through the school lunch program an excellent opportunity is provided for developing good food habits. Children may learn the foods that should be eaten daily, what a good lunch is, and how to choose the right kind

of lunch. Many food habits can be improved because of the opportunity of eating with other children and because of the guidance and direction of the teacher. The food habits developed at school will affect food habits in the home.

The school lunch program will also provide children an opportunity to learn and practice good table manners. Eating together makes possible the practice of table manners instead of just talking about them. Habits of cleanliness, such as washing hands before eating, proper handling of foods, and washing and cleaning dishes may also be learned through the school lunch program.

All of the jobs in the operation of the lunch program have educational values if careful guidance is given to the pupils' work. Many one and two room schools may have a lunch program with the meal being prepared by the pupils. Teachers in these schools should plan definitely to make a learning experience of the different jobs connected with the planning, preparation, and serving of the lunch. An example of how a one room teacher used the lunch program as a learning experience is described later in the bulletin. In large elementary schools and in high schools many learning experiences may be provided in connection with the lunch program.

MANAGING THE LUNCH PROGRAM

Who is responsible for the lunch program? If the school lunch is to be a part of the total educational program, the responsibility for planning, carrying out, and evaluating the school lunch program is not only the concern of the superintendent and principal but also of teachers, pupils, and parents. One person alone cannot make the school lunch a success. It will take the combined efforts of many persons.

Since the superintendent is responsible for all programs in the school, he should carry the administrative responsibilities for organizing and operating the lunch program. These administrative responsibilities may be delegated to the principal of the school. The principal may direct the program himself or delegate the responsibility to a teacher, paid manager, or a volunteer.

Some of the responsibilities of the school administrator are:

- Making the lunch a part of the total school program
- Providing space and equipment for preparation, serving, and storage
- Arranging the schedule so that pupils may have adequate time to get ready for and eat the meal
- Arranging the schedule so that the lunch becomes a part of the regular program of the teacher in charge
- Making arrangements for securing food
- Planning the school lunch budget and keeping records
- Interpreting the school lunch program to the community.

The person directly in charge of the school lunch is the lunchroom manager. This person may be a principal, teacher, paid manager, or a volunteer. In large school systems a trained lunchroom manager is usually employed. In small high schools, the homemaking teacher is often in charge of the school lunch and in elementary schools one of the teachers or a parent may be in charge. The responsibilities of this person will vary with the size and type of school. Some of the responsibilities of this person are:

- Planning menus
- Planning work schedules
- Working with teachers on ways of helping pupils to select well-balanced lunches
- Planning arrangement of equipment in serving and preparation centers
- Handling the money and keeping accounts
- Supervising the preparation and serving of the food.

The classroom teacher has the responsibility of making the lunch a part of the education of the child. Only to the extent that teachers recognize the school lunch as offering learning experiences for pupils, will the lunch program have real educational value to the children. In the classroom the teacher can guide the learning that will take place in the lunchroom. The way in which the classroom teacher uses the school lunch as a learning experience for the pupils depends upon the teacher's vision, the kind of class she is teaching, and the size of the school.

Suggestions for activities related to the school lunch program which may be carried out in various classes are listed below. No attempt has been made to make this a complete list or to check all the classes in which such activities can be done.

Some Activities Related to the School Lunch Program Which May Be Carried on by Pupils in Various Classes:

Suggested Activities	Home Economics	Agriculture	Commercial	Health	Art	Mathematics	Social Science	Science	Elementary
1. Determine what one should eat each day	×	×		×				×	×
2. Plans menus to	×			×				×	×
a. Meet requirements	×			×				×	×
b. Use limited amount of rationed foods	×								
3. Plans ways for overcoming food dislikes	×			×				×	×
4. Keep individual records of food eaten, to see if meeting requirements	×			×				×	×
5. Select recipes	×			×				×	×
6. Change recipes to serve large numbers	×								
7. Make market orders	×					×			×
8. Assist with buying	×		×						×
9. Compare methods of buying—cash, charge, wholesale and retail	×		×						×
10. Assist with preparation of food	×								
11. Investigate new ways of preparing commonly used foods	×								×
12. Set the tables	×								×
13. Assist with serving of lunches	×								×
14. Wash and sterilize dishes	×								
15. Help younger pupils develop good eating habits and good table manners	×			×				×	
16. Set up standards of good behavior in the lunch room	×			×					
17. Study good table manners to use	×			×					×
18. Discuss ways of entertaining guests at mealtime	×								×
19. Plan what foods can be produced to supply food needs for family and lunch room	×	×							×
20. Make food production plan for school lunch	×	×							
21. Make food preservation budget	×							×	
22. Help with planting and cultivating gardens		×						×	
23. Help gather and store foods grown		×						×	×
24. Plan storage facilities	×	×						×	

Some Activities Related to the School Lunch Program Which May Be Carried on by Pupils in Various Classes—Continued

Suggested Activities	Home Economics	Agriculture	Commercial	Health	Art	Mathematics	Social Science	Science	Elementary
25. Build storage closets, cellars, pits, and window boxes for storing food		×							
26. Help can food	×								
27. Find out the causes of food spoilage, and ways different foods may be preserved	×	×						×	
28. Keep records of:									
a. Recipes used	×		×						
b. Menus used	×		×						
c. Income and expenditure	×		×			×			
29. Figure cost of serving of various foods	×		×			×			
30. Figure cost of menus	×		×			×			
31. Figure cost of operating lunchroom	×		×			×			
32. Make budget for operating lunchroom	×		×			×			
33. Plan ways of eliminating waste	×						×		
34. Help keep the lunchroom clean	×			×			×		×
35. Study and evaluate methods used to wash dishes, exterminate pests, and store food	×			×				×	
36. Find out diseases that may be spread through lunchrooms				×				×	
37. Plans ways of preventing these diseases				×				×	
38. Type and mimeograph recipes for pupils to take home			×						
39. Make curtains for serving area	×				×				
40. Bring flowers for tables and arrange them	×				×				×
41. Make pictures or murals for the lunchroom					×				
42. Select and hang pictures in lunchroom	×				×				×
43. Paint the walls		×			×				
44. Decorate the lunchroom for special occasions	×				×				×

1. These activities should be carried on as class activities only as long as they have educational value for the pupil.

A description of how one teacher in a Kentucky rural school used the school lunch as learning experiences for her pupils follows:

At the beginning of the school year the pupils learned the part that food contributes to health, the foods needed for the day, and what is needed for lunch. The pupils then planned what they could do about lunch at school which was to prepare one dish each day. The rest of the lunch was brought from home and supplemented this dish. The children who could afford to pay ten cents a week did so. With this amount of money food, paper towels and napkins, soap, and kerosene were purchased. Some commodities were available to use in the dish prepared. The children planned the menus weekly and they also planned what

could be brought from home to supplement the one dish to be served. Each pupil took the suggestions home.

Committees to do the work were planned by the children and names were drawn each morning to see who could serve on certain committees for the day. The children who washed dishes always cooked the following day. The preparation of the food was done by the cooking committee before school and put on to cook at the recess period. Any finishing up that was needed was done a few minutes before the noon hour.

Before eating each child washed his hands in warm water and with soap. After the hands were washed each child prepared his desk by spreading a napkin on it. The food prepared was passed to him on a tray. Each child took twenty minutes for eating, talking, and having a good time. The dirty dishes were then collected in the same manner the food was served and each child cleaned his own desk. The dishes were washed and put into big buckets and boiled during the noon hour and dried and put away during the recess period.

The equipment used consisted of a spoon and bowl or cup brought by each child from home, a small two-burner oil stove, two buckets to heat water for hand washing and for sterilizing dishes, two dish pans, a large container to cook the food in, a few pans and small equipment used in preparing the food, and cabinets and shelves for storage which were planned and built by the children.

A school lunch committee may also be an aid to the lunch program. The lunch committee may be composed of representatives of groups interested in the school lunch such as Parent-Teachers Association, civic clubs, public health, nutrition committees, and the school administrator, teachers, school lunch manager, and pupils. The committee can assist the lunch program by acting as an advisory body. Some of the ways in which the committee may assist are:

1. Keeping the public informed about the value and needs of the lunch program
2. Securing financial assistance for the carrying out of the program
3. Locating volunteer workers
4. Recommending policies governing the operation of the lunch program.

FINANCING THE SCHOOL LUNCH PROGRAM

Many school administrators feel that they cannot have a school lunch program because of the problem of financing it. School lunch programs are financed in a number of ways. Some of these ways are:

1. The board of education may allow a definite amount in the budget for the operation of the program. As the school lunch is a part of the total school program, many school administrators feel that some provision for the operation of this program must be made by the board of education.
2. Civic clubs frequently accept the responsibility of giving some financial assistance to the school lunch program. Such clubs as the Kiwanis, Rotary, Business and Professional Women, and Women's Clubs, which are concerned with community problems, may be interested in contributing to the school lunch program if the members understand the need for and value of such a program.
3. The Parent-Teachers Association, organized to promote the welfare of the child, is especially interested in the school lunch program and can make many contributions to it. Financial assistance as well as equipment, labor, and food are often provided by this association.
4. Contributions from the homes in the form of equipment, food, and money are of help in financing a school lunch program. The majority of homes will gladly make such contributions in order that a good school lunch program may be inaugurated and maintained.
5. Several Federal programs have given assistance to the school lunch program during the past few years. Funds are now available from the Food Distribution Administration for the securing of food for school lunches as a part of the nation's wartime food program. The State Department of Education and the Food Distribution Administration have entered into an agreement governing the operation of school lunch programs receiving reimbursement from these funds. The State Department of Education is sponsoring this program in the public schools being responsible for the development and supervision of the program.

Some information and regulations concerning the securing and use of these funds are given below.

a. Eligibility of schools.

Schools may be eligible to receive reimbursement provided that:

- (1) Children from low income families directly benefit.
- (2) Only one type of meal is served to all children with the exception that Type C may be served to children who bring their own lunch.
- (3) No more than one cent is charged for Type C meals.
- (4) Meals are served without charge to all children unable to pay.
- (5) There is no distinction or segregation of any sort between paying and non-paying children.
- (6) All funds accruing from the lunch program are utilized exclusively in the lunch program.
- (7) The school administrator certifies on the application that the school cannot without the financial assistance of the FDA, operate an adequate lunch program, supplying lunches without charge or at a price below cost to those children unable to pay the full cost of lunches served.
- (8) Estimates of monthly receipts and expenditures shown on the application indicate that need for assistance to the lunch program actually exists.
- (9) The school lunch program is to be administered by the local board of education.

b. Making application for reimbursement.

The application for approval to receive reimbursement for a lunch program is to be made through the superintendent of the school district on the standard application Form SL-1, "Application for Approval For FDA Reimbursement For The School Lunch Program." This form is to be made out in quintuplicate for each school applying for reimbursement and submitted by the superintendent to the Division of Vocational Education, State Department of Education. When action is taken, two copies will be returned to the superintendent of schools, one copy for his office, and one for the school.

c. Reimbursement.

- (1) Reimbursement is made for the purchase of foods designated by the Food Administration. The Administration has selected certain foods which the schools can purchase and for which reimbursement can be made. These foods are known as designated foods.
- (2) Foods designated by the Food Distribution Administration for which reimbursement may be claimed are:

milk and cheese
fresh and dried fruits
fresh and processed vegetables
fresh meat, salt pork, ham, bacon, and poultry
eggs
dried beans and peas
soybeans and products thereof
peanuts and peanut butter
oleomargarine with added vitamin A, butter, lard,
cooking fats and oils, including oils used in salad
making
cereals and bread
other foods as may be specifically designated by the
Food Distribution Administration.

- (3) When schools have a lunch program which provides a choice of foods as in a cafeteria, all children must select a complete lunch if reimbursement is made from FDA funds.
- (4) The amount of the reimbursement shall be the total purchase cost of the designated foods; provided this amount does *not* exceed the amount obtained by multiplying the number of meals served monthly by the maximum rate of payment for the type meal served. If the purchase cost of the designated foods is less than the amount obtained by multiplying the number of meals served monthly by the maximum rate of payment for the type meal served, the purchase cost of designated foods will be the amount of reimbursement.
- (5) Reimbursement is to be claimed monthly by the local board of education on Form FDA-536, "Report and Certification of Purchases." Each school shall prepare monthly five copies of Form FDA-536 and submit four copies to the superintendent of the school district and retain one copy in the files of the school. Three copies of the report of each school supported by original certified copies of vendors' invoices shall be sent to the

Division of Finance, State Department of Education, Frankfort, Kentucky, within five days after the close of each month. The vendors' invoice must be itemized, showing quantities of designated foods bought, the price of each, and the invoice must be signed by the vendor and billed to the local board of education. The invoice should be made in duplicate, and a copy retained by the local board of education. Form F-75, Claim Blank, may be used instead of having duplicate invoice made. This blank is furnished by the Kentucky State Department of Education. If this blank is used, it should be labeled "Community School Lunch Program" in order that it may be readily separated from other claims allowed by a board of education.

- (6) Schools will not be reimbursed for more than one meal per child per operating day.

d. Type of meals.

Types of lunches and maximum rates of payment for which schools may be reimbursed follow:

Type A (9 cents) A complete lunch providing one-third to one-half of the day's nutritive requirements and consisting of at least: (1) One-half pint of milk as a beverage; (2) two ounces of meat or fish, or one egg, or two ounces of cheese, or one-half cup of dried peas, beans, or soybeans, or one-fourth cup of peanut butter; (3) one cup of vegetables or fruit, or one-half cup of each; (4) two slices of bread or two muffins or other hot bread, made of whole grain or enriched flour or cereal; (5) two teaspoons of butter or oleomargarine with added vitamin A.

Suggested Patterns for Type A

A complete lunch may be served as a "plate" or "tray" meal with individual portion of the different types of food in the amounts outlined above.

OR

It may be built around the content of items (2) and (3) combined in one dish provided the portion served is large enough to include the amounts indicated, and milk, bread and butter or oleomargarine are served.

OR

It may be built around a main dish including item (2) plus one-half of item (3) supplemented by a raw vegetable or fruit, and served with milk, bread and butter or oleomargarine.

Type A, without milk.
(7 cents)

Type B (6 cents) A lunch less adequate nutritionally and consisting of: (1) one-half pint of milk as a beverage; (2) one ounce of meat or fish, or one-half of an egg, or one ounce of cheese, or one-fourth cup of dried peas, beans, soybeans, or two tablespoons of peanut butter; (3) one-half cup of vegetables or fruit; (4) two slices of bread or two muffins or other hot bread, made of whole grain or enriched flour or cereal; (5) one teaspoon of butter or oleomargarine with added vitamin A.

Suggested Patterns for Type B

This type of lunch may be built around a one-cup serving of thick soup, chowder, stew or a casserole dish, including the content of items (2) and (3) and served with milk, bread and butter or oleomargarine.

OR

It may be built around a three-fourth cup serving of a salad using the content of items (2) and (3) and served with milk, bread, butter or oleomargarine.

OR

It may be built around a sandwich, using the content of item (2), (4), and (5) and served with milk and a fruit or a vegetable.

Type B, without milk.
(4 cents)

Type C (2 cents) One-half pint of fluid milk. Fresh whole milk must be served as a beverage in order to receive FDA reimbursement.

e. Price charged for meals.

- (1) The prevailing price that is charged for the type lunch served will be determined by the school. (The prevailing price is the price charged to the children who can pay the full cost of the meal).
- (2) Schools may charge some children less than prevailing price when they cannot pay the full price.
- (3) The following should be carefully considered before deciding on the price per meal:

Type of lunch to be served
Cost of food in locality
Cost of paid workers
Fuel and utilities
Miscellaneous supplies
Permanent equipment to be purchased
Number of children to be served a free lunch
Number of children to pay less than prevailing charge per lunch.

- (4) A school may charge no more than one cent (1c) for Type C lunch (milk only). The charge for Type A or B lunches with milk must be no more than one cent (1c) higher than the same type lunch without milk.

- (5) The number of paying and non-paying children will depend upon the needs of the children in the school.
- (6) The maximum rate of reimbursement is not sufficient to pay for the cost of all food needed to serve the various Type meals.

f. Records.

- (1) Daily records to be kept are:
 - (a) Record of all expenditures (see suggested form, Example I).
 - (b) Record of expenditures for designated foods (see suggested form, Example II).
 - (c) Record of the number and type lunches served daily indicating the number paying prevailing charge, the number paying less than and the number of free lunches served. (See suggested form, Example III).
 - (d) Record of the menus that are served. (See suggested form, Example IV).
- (2) Invoices of expenditures for all FDA designated foods must be kept on file.

Example IV

RECORD OF MENUS SERVED FOR THE MONTH

MONTH OF..... NAME OF SCHOOL.....

DATE	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

SELECTING AND EQUIPPING THE LUNCHROOM

The room and the equipment used for the school lunch will vary from school to school. In many schools rooms that are not being used for other purposes may be remodeled so that they may be used for preparation and serving of the lunch. The space selected should have the following characteristics:

1. Be of sufficient size for preparation, serving, and storage of food
2. Have good ventilation—cross ventilation if possible
3. Have sufficient light—either natural or artificial
4. Have walls and floors that may be easily cleaned
5. Be conveniently located for delivery of food and garbage removal.

When possible it is desirable to have the preparation and serving of food in separate rooms that are adjoining or nearby.

The type of equipment needed for the preparation and serving of food will depend upon the type of meal served and the number served. The large equipment needed for the most simple type of lunch program is a stove, storage cabinet and table. The large equipment needed for the preparation of food for most school lunch programs is a stove with oven, a refrigerator, storage cabinets for food and for utensils, work tables, and serving counters.

Following is a suggested list of small equipment needed for the preparation of food for 50 to 100 children.¹

- 2 kettles (20 quart) with straight sides and side handles if possible
- 3 kettles (16 quart)
- 1 kettle (10 quart)
- lids to fit all kettles
- 1 (15 quart) double boiler
- 3 drip pans (suitable for size of oven) 3 inches deep
- 3 shallow baking sheets (suitable size for oven)
- 3 (3 quart) pitchers
- 1 food grinder

¹ Adapted from Handbook for Workers in School Lunch Programs, NFC-3. Nutrition and Food Conservation Branch, Food Distribution Administration USDA.

- 2 large trays
- 3 or 4 large mixing bowls of assorted sizes
- 3 large dishpans
- 1 or 2 dish drain racks
- 1 garbage can (galvanized, watertight, with cover, adequate for 1 day's waste)
- 1 large colander
- 1 large coarse strainer
- 1 large frying pan
- 1 cutting board (size board 18 by 18 by 2 inches)
- 1 can opener (institutional size)
- 1 can opener (hand-operated)
- 1 rotary egg beater
- 2 soup ladles with side lips
- 3 large wooden stirring spoons (long enough to use in the 20-quart kettles)
- 2 standard measuring cups (1-cup size)
- 2 standard quart measures (straight sides)
- 1 large kitchen fork
- 1 small kitchen fork
- 2 or 3 paring knives
- 2 sets of measuring spoons
- 1 pair shears
- 2 vegetable brushes
- 1 large grater and shredder
- 1 knife sharpener
- 1 large potato masher
- 1 spatula or cake turner
- 1 apple corer
- 1 flour sifter
- 1 broom
- 1 dust pan
- 1 mop with pail
- 1 towel rack (or clothesline).

The minimum serving equipment for each child is a plate, soup bowl or cereal dish, glass or cup, fork, and spoon.

PLANNING THE MENU

When planning menus for the school lunch a number of factors should be considered as: amount and kind of food needed by the body, attractiveness, ease of preparation, foods available, equipment

on hand, and cost. According to recognized authorities the minimum food requirements for children each day are:

milk—1½ pints to 1 quart
vegetables—2 servings, one green or yellow
fruit—2 servings, one citrus or tomatoes and one other
potatoes—1 serving
eggs—at least 3 or 4 times a week
meat, fish, dried peas or beans—once a day
whole-grain or enriched cereals and bread
butter, or margarine fortified with Vitamin A at every meal.

The noon meal should consist of approximately one-third of the daily foods required. When possible a survey should be made of the foods eaten by the pupils at home so that the school lunch can be planned to supply the foods which are needed daily, but are most often lacking in the meals at home.

Attractiveness is an essential factor in meal planning. Color, texture, flavor, and shape of the food served all play an important role in making a meal attractive. Some guides to remember in making a meal attractive are:

1. Include at least one colorful food in every meal. When several colorful foods are used in the same meal select foods having colors that combine harmoniously. Foods naturally lacking color may be brightened with garnishes, such as a slice of tomato, carrot strips, sprigs of parsley, a piece of bright colored fruit, or a spoonful of jelly.
2. Have at least one hot food in each meal so there will be a contrast of temperature.
3. Serve foods that have a variety in texture as soft foods and crisp foods. Toast or crackers served with soup and mashed potatoes served with a crisp vegetable salad are examples of variety of texture in meals.
4. Prepare foods so that all foods do not have the same shape as all diced, sliced, shredded, balls, or wedges. If string beans are served with beets, serve beets whole or sliced instead of shredding them.
5. Avoid serving two or more foods prepared in the same way in meal, for example, creamed carrots and creamed potatoes.
6. Combine foods that have contrasting flavors as apples with bacon, tomatoes with meat loaf, etc. A meal that has all mild-

flavored foods or too many strong flavored foods will not appeal to the appetite. The same flavor or food should be served only once in a meal. For example, if escalloped tomatoes are the vegetable, tomatoes should not be repeated in the soup, sauce, or salad.

When planning menus, careful consideration also needs to be given to the amount of equipment and the help available for the preparation of the meal. If help is limited several dishes which require a lot of preparation should not be included in the same menu. For example, if a number of vegetables are to be prepared for soup, the salad or dessert should be the type that requires little time and preparation. Attention should also be paid to the time different preparations have to be made. Avoid having too many last minute preparations in the meal. Some foods in the menu should be the type that can be prepared in advance and only a few should have to be prepared just before serving. Many lunchrooms have limited oven space and the preparation of meat loaf, berry cobbler and hot bread for the same meal would be impossible. When more than one food on the menu is to be baked, the foods should be ones that can be baked at the same temperature or at different times without spoiling the finished product.

Cost is another important factor in meal planning. Foods which are plentiful should be selected for the meals. The method of preparation of these foods should be varied so that the meals are not monotonous. For example, if carrots are plentiful they may be used one day as a vegetable, a second day in a loaf as a substitute for meat, and a third day as a salad in combination with fruit or with other vegetables. Cost may be reduced by combining foods which are expensive with less expensive foods. For example when tomatoes are high and cabbage is less expensive they may be combined in a salad using a larger quantity of cabbage. The waste of food is also a factor which increases the cost of school lunches. Careful use should be made of any left overs. Foods which are generally liked should accompany dishes that are not so well liked so that food will not be wasted. Another source of waste is the preparation of food. For example, apples and potatoes are often peeled so that much of the food is thrown in the garbage pail. Food is also wasted when improperly prepared. The following suggestions may be helpful in preparing food for school lunches:

1. Prepare foods as short a time as possible before serving to save vitamin content.

2. Cut vegetables in large pieces so they do not lose food value or their identity in preparation.
3. Cook vegetables as short a time as possible to preserve the food value, color, and flavor.
4. Over cooking white vegetables, as potatoes, turnips, and onions, turns them an ugly gray color.
5. Avoid adding soda to vegetables to preserve the color or make them tender as much of the food value is destroyed and the texture becomes slimy when soda is used.
6. Cook greens in as little water as possible. Only a little water in the bottom of the vessel or just the water left on the leaves in washing is sufficient for spinach and young tender greens.
7. Cook dried fruits and vegetables in the water in which they are soaked.
8. Do not remove the skins of highly colored fruits and vegetables when edible because they contain much food value. If they are not edible, remove as little as possible.
9. Cook all meats, eggs, and cheese slowly. This avoids toughening the food and helps prevent shrinkage.
10. Serve as little fried foods as possible in school lunches as fried foods are difficult for children to digest.
11. Avoid the use of highly seasoned foods. Pepper and spices should be used sparingly or not at all.
12. Use only enough sugar to bring out the flavor of the fruit.
13. Taste each food before serving it to children to be sure of taste and quality.
14. Cook home canned non-acid food 15 minutes before tasting or serving. If some is left over, reheat again before serving.

HEALTH AND SANITATION

Wherever food is prepared the highest standards of cleanliness should be maintained. This is especially true of the school lunchroom because of the effect it may have on the health of the child and on the formation of good health habits.

Persons working in the lunchroom should be clean and neat in appearance. They should have good health and observe good health practices. Some of the health practices which should be observed are:

1. Protect food from hair by wearing hair net or head band.
2. Wash hands before beginning food preparation and after coughing or sneezing and after returning from the toilet.
3. Dry hands on individual hand towel, never the dish towel.
4. Cover mouth with handkerchief when coughing or sneezing.
5. Avoid using a comb in the food preparation center.
6. Sample food with a "tasting" spoon—never with the stirring spoon.
7. Avoid wearing rings and bracelets.
8. Keep dish towels hung in proper place when not in use instead of throwing them over the shoulder or carrying under the arm.

The room in which the food is prepared should be kept clean at all times. Frequent washing of floors, walls, woodwork and windows is necessary. No sweeping should be done while food is being prepared or served. The windows and doors should be screened. All garbage should be kept in tight, non-absorbent and easily washed receptacles with close fitting lids, removed frequently, and disposed of in a manner approved by the local health officer.

All dishes and utensils should be washed properly to prevent the spread of infection. The method used in the school lunchroom should conform to requirements set up by the local department of public health. A general procedure to follow in washing dishes is to wash dishes in a generous supply of hot, soapy water, next rinse dishes in hot clear water to remove soap, and then place dishes in a chlorine solution and allow them to stand not less than three minutes taking care that dishes are completely covered with the solution. This sterilizes the dishes. Hot water may again be poured over the dishes but this

is not absolutely necessary. If time does not permit dishes to drain until dry, they may be dried with clean towels and put away at once. Dish towels and clothes should not be used a second time without laundering. Dish pans should be carefully cleaned and dried.

The milk used in the lunch room, whether for cooking or as a beverage, should be of the highest grade that can be purchased and should be inspected by qualified health authorities. Pasteurized milk as the only milk approved by the State Health Department as a beverage. In many communities pasteurized milk cannot be obtained and the schools have to decide whether they will serve raw milk, pasteurize the milk themselves, or serve no milk to the children. In the July, 1943 issue of the "Commonwealth of Kentucky Bulletin of the Department of Health" Dr. F. W. Caudill, State Health Department, explains that milk is an excellent medium for the growth of bacteria and an excellent vehicle for spreading infection to the consumer. He also states that diseases which may be transmitted by milk are typhoid fever, bacillary dysentery, scarlet fever, diphtheria, tuberculosis, undulant fever, septic sore throat, and staphylococcus milk poisoning. Milk may be clean and still contain disease bacteria. Pasteurization insures the killing of disease producing germs. When raw milk is served in a lunch room, both parents and children should be informed of the dangers of drinking raw milk and given a chance to decide whether or not they want to drink the milk so that the school will not be held responsible if some disease is contracted from milk sold at the school.

The following methods of pasteurization of milk are recommended by the State Health Department and may be found usable in some schools:

Home Pasteurization Method No. 1. Place the milk in an aluminum vessel, over a hot flame, and heat to 160° F., using a thermometer and stirring constantly. Then immediately set the vessel in ice and water or cool water and continue stirring until cold.

Home Pasteurization Method No. 2. For this method a thermometer is necessary. Bottles should be boiled or exposed to live steam and inverted to drain. Fill bottles with clean milk and cap. Then set all bottles of milk on a rack in a pail or boiler of cold water. Cold water should be to the level of the milk. Punch a hole in cover of one bottle near center of container and insert the thermometer. Heat until the milk registers 145° F. Remove the pail or boiler from the heat and leave the bottle in hot water for 30 minutes, reheating if that is

necessary to keep the milk at 145° F. After the 30 minute period replace the hot water gradually with cold water until milk has cooled. Place under refrigeration as soon as cooled and keep until used.

When lunch programs use home canned non-acid foods donated by parents and other members of the community, care should be taken to boil the canned product 15 minutes before tasting or serving. Spinach and cream style corn should be boiled 20 minutes. Count time after product has begun to boil. This precaution should be taken to prevent the food poisoning, botulism. It is impossible to tell that food is capable of causing botulism by just looking at it or smelling it.

Where drinking water is not from an approved city supply it should be tested regularly to insure its safety.

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