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Food, Nutrition and Health

FOR SCHOOL CHILDREN

MARY A. STENNIS



A Florida Orange for Every Lunch

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

(Acts of May 8 and June 30, 1914)

Agricultural Extension Division, University of Florida,
Florida State College for Women, and United States Department of Agriculture
Cooperating

WILMON NEWELL, Director

Bulletins will be sent free upon application to the State Home
Demonstration Department, Tallahassee, Florida

CONTEXT

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THE MOTHER SPEAKS

Daughter of mine, you're a babe no more!
The schoolhouse stands with its open door,
And beckons you out to a world unknown,
Where you must stand on your feet, alone!

Tell me, dearest, what I shall do,
To bring the best of Life to you?
What can I give you—what can I ask—
That Life may set you an easy task?

That were a cowardly thing and weak!
Rather I'd ask for strength to seek
Deeds of service and daring, too;
Strength to carry a good deed through.

To match yourself with the outside throng,
You must be healthy and straight and strong;
Food and drink and hours for play
Chosen carefully day by day!

Cling to the things that stand for health;
They will mean more to you than wealth!
A body nurtured to strength and grace
Will find the world a happy place!

No, take your share of Life's prickly stings;
He can give you, also, the loveliest things!
So of Life this is all I ask for you—
Health—and the joyous will to do!

—*Jean Fraser Macdonald.*

FOOD, NUTRITION AND HEALTH FOR SCHOOL CHILDREN

By MARY A. STENNIS

I.

PURPOSE OF THE SCHOOL LUNCH PROGRAM

Optimal health for the child is dependent upon sufficient food of the right kind, given regularly and under proper conditions. Any constructive program today in foods is made on the basis not merely of "something to eat" but of "food, nutrition and health."

This effort to supply material of value to communities in establishing better school lunches is made with a view to co-operating with the school, the home and the home demonstration club in attaining their goal of optimal health for children. Any health program, to be not merely corrective but also preventive, must be educational. The food program must be not simply the providing of the right kind of food but it must include teaching, by demonstration, intelligent selection of foods to build the body and cheerful, joyous attitude in the matter of good manners, cleanliness and association with others.

The school lunch program is educational. Intelligent choice of food, right attitude toward food and better nutrition and economic values are demonstrated in actual practice. "School lunches," viewed as an educational health measure plus an economic training, is a cause worthy the support of the home, the club, the school and the community.

The Home Demonstration Department, therefore, in response to a state-wide request from club women, club girls, home demonstration agents, teachers, superintendents and principals of schools, offers this material with the hope of a better understanding, by all concerned, of the problem indicated in the title, "Food, Nutrition and Health for School Children."

The author is indebted to Miss Anna M. Tracey, dietitian, State College for Women, who wrote Chapter V on organization and administration of the school lunch cafeteria.

II.

FOOD AND FOOD HABITS FOR THE SCHOOL CHILD

FOOD

The growing child is building a body; he is busy; he must be well. In order to be well he must be well fed.

Foods must supply the building material, must give energy and must provide resistance to disease if the building be done well. Quantity and variety are essential.

QUANTITY

Records show that many children eat too little. Work and play—all activity—call for food. Children are much more active and need more food per pound of body weight than adults. Children are growing and should be, at least, up to average weight for height and age. The age, height, weight card on pages 12 and 13 will serve as a reference. Use the scales and study the findings.

The age, size and activity of the child help to determine the amount of his daily food. Rural children in general are more active and, therefore, require a more substantial lunch than city children. Too much food, however, results in drowsiness.

The school lunch should in no way take the place of home meals. Breakfast and dinner (evening meal) should be even more substantial when the child is eating one meal at school.

As to calories or energy value, the average child of 10 years needs about 575 for breakfast, 500 for lunch and 825 for dinner, while the average child of 13 years should have at lunch about 650 calories. The average 16-year-old child needs from 750 to 900 calories at lunch. See page 11 for table of caloric values. No child should ever be allowed to go without breakfast.

Children who are as much as 7 per cent under weight may be given fruit juice or milk at the morning recess. Weighing the children once each month, and measuring every three months should be a part of the lunch room program. This is the best method of learning whether or not a child is growing and gaining through the year as he should. The teacher or adult who looks on weighing and measuring as a nuisance is either ignorant or lacking in energy. She will constantly be annoyed by other people wanting to weigh or measure the children. The best way is to secure good bar scales and teach the older pupils to do the weighing and measuring. Make the record chart, and let the children know what they need to gain.

VARIETY

In order to build the body well or to resist disease the child must have variety in his diet. No one food is complete. Since the building is a gradual process, and since disease is always near, it is necessary that the child have a well planned diet every day.

Muscles, fat, bones, blood, and tissues must be built. Food for energy and food for growth must be supplied. Variety then is needed, and is easily obtained from the following foods:

Milk.—No other food can replace it. A quart a day for every growing child is a safe rule.

Eggs, fish, chicken or meat or their equivalents. If the child has a generous supply of milk and eggs, he will need little meat, scarcely any before 7 years of age. Two to three ounces of meat daily for a child from 7 to 10 years of age, and three ounces daily for a child from 10 to 14 years of age is enough.

Bread, cereals and other grain products.—Nearly one-third of the food supply is in this class. These foods should be very thoroughly cooked. Entire wheat, flour, brown rice, and whole corn meal are more nourishing than white cereals, and they help to prevent constipation.

Vegetables.—Vegetables are essential. Oftentimes a child's appetite cannot be fully satisfied without vegetables. They supply bulk. Turnip greens and many other kinds of greens, cooked or uncooked, as well as turnips, carrots, onions, green beans and peas, celery, tomatoes, squash, cauliflower, eggplant and okra, supply the unusual food elements—minerals and vitamins. Let the stews or soups be more vegetables—less meat. Use the vegetable cooking water for soups and sauces.

Fruits.—Fruits are close akin to vegetables in their gift to the diet. The flavor is more popular. Fresh fruit is best. Florida oranges have an unexcelled food value. All lunch rooms should serve Florida orange juice. Canned or dried fruits should be used where fresh fruit is impossible. Fresh fruit should be fully ripe.

Sweets.—Children easily get too much sugar. It spoils the appetite and the digestion. Simple puddings and custards and fresh or dried fruit are the best sources of sugar. Corn syrup or honey has far better food value than granulated sugar. It is better to have on the lunch counter some simple sweets of the kinds mentioned, than to have the child satisfy his over-trained desire for sweets with soft drinks, chewing gum and cheap candy.

Fat.—Fat is needed by growing children. They use it quickly. Milk fat (butter and cream) is best and is more easily digested than other fats. Whole milk has a normal proportion of fat. If the child drinks skim-milk, he should eat plenty of butter.

FOOD HABITS

The growing child of today is the grown-up of tomorrow. The fitness of the child's food today determines largely the fitness of the grown-up's citizenship tomorrow. Conservation of the child is a far more important and a far more difficult task than conservation of the food. Those who successfully direct the feeding of the child not only must know the food

and the child's needs but they must also understand the training of the child into the right food habits and into the right attitude toward the building and conservation of his own body. Good food habits must start today. Tomorrow will be more difficult—possibly too late. In fact, even the nursing period has its good habits or bad, as the training may be.

The school lunch may fill an important place in training for good food habits. The following points should be observed:

1. **Meals should be at the same hour each day.**—The normal child needs three regular daily meals. The underweight child sometimes needs a "between meal." The lunch room can easily supply milk or Florida fruit juice at the recess hour and can prevent the use of candy, nuts, cake and cookies at these times. Regularity in regard to one meal will demonstrate to the child the value of the custom.

2. **Plenty of water should be given.**—Children need from six to eight glasses of water daily, but should take not more than two glasses with one meal. Food should not be washed down with water.

3. **Children, if well directed, will learn to like things they need.**—Because they have not been given vegetable juice, puree, and later vegetables in early childhood, many children are left to learn at the school lunch to like vegetables simply prepared and served. Patience and firmness are needed. "Begin by giving him a little; give him only one new food at a time; give him time to learn for himself; but don't ever give up," is a good rule. The child was not born with a cultivated taste. Past training gave him his present taste. Present and future training can correct the mistakes.

4. **Children should be happy while eating.**—The lunch hour should be a social occasion. No undue excitement just before, during, or after the lunch should take place. System and order are necessary for everybody's happiness, but they are a means, not an end.

5. **Plenty of time should be allowed for meals.**—A child should eat without hurry or worry.

6. **Posture, at the table, affects nutrition.** It is easily taught in the school lunch room by means of group competition. "Sit tall; eat tall; grow tall" is a goal to stress.

7. **Behavior in general affects the appetites and enjoyment and consequently the health of the children.**—The lunch room director who has an understanding of the behavior of children as well as scientific training in nutrition, has every possibility of success.

8. **Dirt is dangerous.**—Clean hands and faces; clean table; clean surroundings make for safety, happiness and health. Cleanliness of the school lunch demonstrates and inspires cleanliness in the home.

9. **Table etiquette** may be simply taught by posters, by group competition, and by demonstration. Allow the children to make their own list of suggestions, including the following:

Wash hands before eating.

Keep your place in line.

Go in order to your seat and arrange plate, knife, fork, spoon, drinking cup and bowl.

Sit straight; feet on floor; elbows close to sides.

Keep your hands in your lap when not eating.

Speak only in low tone at the table.

Dip your soup spoon from you—not toward you.

Always place the side of your spoon to your lips.

Place spoon in saucer or plate before drinking from your cup or glass.

Keep knife and fork on your plate when not using them.

If food is too hot, let stand until cooler.

Eat slowly, taking small portions at one time; chew quietly with lips closed.

Use napkins for fingers and lips; keep handkerchief out of sight.

Eat everything—dessert last.

Let your conversation be pleasant. Criticism of food at the table is a reflection on your home training.

FOOD HABITS SCORE

All children should learn to score themselves on food habits as they learn something about food and how it builds and keeps the body. No accurate measurements need be made and no actual checking of food eaten every meal nor every day is necessary, but it is important that the habits relating to certain of the essential foods be scored.

The suggested score card, which follows, covers habits relating to certain essentials. These suggested foods, with bread, butter, potatoes, and eggs or meat, give a balanced diet. The keeping of this score card daily is not necessary. Each child should keep such a score for at least one month out of the year. If his score is high, and his age, weight and height show a good average, it is a good plan to "forget it." If his score is low, he should have help in raising it.

FOOD HABITS SCORE CARD

Daily Credits		Mo.	Tu.	Wd.	Th.	Fri.	Sat.	Su.
Milk	4 cups—15 3 cups—10							
Vegetables other than potatoes	Twice—15 Once—10							
Mark days when you eat greens	"G"							
Fruit	Twice—15 Once—10							
Mark days when you eat tomatoes or oranges	"T"							
Water	6 Glasses—10 4 Glasses— 5							
Eating breakfast	15							
No tea or coffee	20							
No candy between meals	10							
Daily scores (possible score)	100							

Average of daily scores (add together and divide by 7)

Deduct—

10 credits for liking less than 8 vegetables.....

10 credits for liking less than 2 greens.....

10 credits for liking less than 2 "T's".....

Total deductions from average.....

Weekly score.....

Name..... Age..... Ht..... Av. Wt.....

Actual Wt.....

100 CALORIE PORTIONS

Buttermilk.....	1 1/8 cups
Whole Milk.....	5/8 cup
Butter.....	1 tablespoon
Cream (thin).....	1/4 cup
Cream (thick).....	1 1/3 tablespoons
Cream (whipped).....	2 tablespoons
Cottage Cheese.....	5 1/2 tablespoons
Wesson Oil.....	1 tablespoon
Eggs.....	1 1/3 egg
Orange.....	1 orange
Orange juice.....	1 cup
Apple.....	1 medium
Prunes.....	4 medium
Lean Beef (4x4x1/4-in.).....	1 slice
Bacon, broiled.....	4 small slices or 2 medium slices
Chicken, roast (4x2 1/2 x 1/4-in.).....	1 slice
Cabbage (raw, chopped).....	5 cups
Carrots (cooked in cubes).....	1 1/2 cups (3 to 4 medium)
Turnips (cooked).....	2 cups
Beets (cooked).....	2 1/4 cups
Beans (green, cooked).....	2 1/3 cups
Spinach (cooked).....	2 1/2 cups
White potato (baked or boiled).....	1 medium
Sweet potato.....	1/2 medium
Bread (white).....	1 slice (3/4-in.)
Oatmeal (uncooked).....	4 tablespoons
Shredded Wheat.....	1 biscuit
Spinach (boiled).....	3 cups
Tomato (fresh).....	4 medium
Peas (canned or fresh).....	3/4 cup
Beans (baked).....	1/3 cup
Lima beans (fresh).....	1/2 cup
Onions.....	5 medium
Lettuce.....	2 large heads
Boiled dressing.....	1/4 cup
French dressing.....	1/2 tablespoon
Mayonnaise dressing.....	1 tablespoon
Peanuts.....	20-24 singles
Pecans.....	12 halves
Sugar.....	2 tablespoons
Molasses.....	1 1/2 tablespoons
Cocoa.....	2 tablespoons

Table I. WEIGHT-HEIGHT-AGE TABLE FOR GIRLS OF SCHOOL AGE*

Height (inches)	Average weight for height (lbs.)	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
		yrs.															
38	33	33	33														
39	34	34	34														
40	36	36	36	36°													
41	37	37	37	37°													
42	39	39	39	39°													
43	41	41	41	41°	41°												
44	42	42	42	42°	42°												
45	45	45	45	45°	45°	45°											
46	47	47°	47	47	48	48°											
47	50	49°	50	50	50	50	50°										
48	52		52	52	52	52	53°	53°									
49	55		54	54	55	55	56	56°									
50	58		56°	56	57	58	59	61	62°								
51	61			59	60	61	61	63	65								
52	64			63°	64	64	64	65	67								
53	68			66°	67	67	68	68	69	71°							
54	71				69	70	70	71	71	73°							
55	75				72°	74	74	74	75	77	78°						
56	79					76	78	78	79	81	83°						
57	84					80°	82	82	82	84	88	92°					
58	89						84	86	86	88	93	96°	101°				
59	95						87	90	90	92	96	100	103°	104°			
60	101							91°	95	97	101	105	108	109	111°		
61	108								99	100	101	105	108	112	113	116	
62	114								104°	105	106	109	113	115	117	118	
63	118									110	110	112	116	117	119	120	
64	121									114°	115	117	119	120	122	123	
65	125										118°	120	121	122	123	125	126
66	129											124	124	125	128	129	130
67	133											128°	130	131	133	133	135
68	138											131°	133	135	136	138	138
69	142												135°	137°	138°	140°	142°
70	144												136°	138°	140°	142°	144°
71	145												138°	140°	142°	144°	145°
Age-years			6	7	8	9	10	11	12	13	14	15	16	17	18		
Average Height (inches):																	
Short			43	45	47	49	50	52	54	57	59	60	61	61	61	61	
Medium			45	47	50	52	54	56	58	60	62	63	64	64	64	64	
Tall			47	50	53	55	57	59	62	64	66	66	67	67	67	67	
Avg. Annual gain (lbs.):																	
Short			4	4	4	5	6	6	10	13	10	7	2	1	1	1	
Medium			5	5	6	7	8	10	13	10	6	4	3	1	1	1	
Tall			6	8	8	9	11	13	9	8	4	4	1	1	1	1	

NOTE.—In order to extend the range of the tables so as to include weights of children who are taller or shorter than those in these groups there have been added as marked figures estimated weights. All the other weights represent averages for each inch in height and age of the children observed in this study.

*Prepared by Bird T. Baldwin, Ph. D., Iowa Child Welfare Research Station, State University of Iowa, and Thomas D. Wood, M. D., Columbia University, New York City.

Table II. WEIGHT-HEIGHT-AGE TABLE FOR BOYS OF SCHOOL AGE*

Height (inches)	Average weight for height (lbs.)	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
		yrs.															
38	34	34	34°														
39	35	35	35														
40	36	36	36°														
41	38	38	38	38°													
42	39	39	39	39°	39°												
43	41	41	41	41°	41°												
44	44	44	44	44	44°												
45	46	46	46	46	46°	46°											
46	48	47°	48	48	48	48°											
47	50	49°	50	50	50	50°	50°										
48	53		52	53	53	53	53°										
49	55		55	55	55	55	55	55°									
50	58			57°	58	58	58	58°	58°								
51	61			61	61	61	61	61	61°								
52	64			63	64	64	64	64	64	64°							
53	68			66°	67	67	67	67	67	68	68°						
54	71				70	70	70	70	71	71	72°						
55	74				72°	72	73	73	74	74	74°						
56	78				75°	76	77	77	77	78	78	80°					
57	82					79°	80	81	81	82	83	83°					
58	85					83°	84	84	85	85	86	87					
59	89						87	88	89	89	90	90	90				
60	94						91°	92	92	93	94	95	96				
61	99							95	96	97	99	100	103	106°			
62	104							100°	101	102	103	104	107	111	116°		
63	111							105°	106	107	108	110	113	118	123	127°	
64	117								109	111	113	115	117	121	126	130°	
65	123									114°	117	118	120	122	127	131	134
66	129										119	122	125	128	132	136	139
67	133										124°	128	130	134	136	139	142
68	139											134	134	137	141	143	147
69	144											137	139	143	146	149	152
70	147											143	144	145	148	151	155
71	152											148°	150	151	152	154	159
72	157												153	155	156	158	163
73	163												157°	160	162	164	167
74	169												160°	164	168	170	171
Age-years		6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Av. height (inches):																	
Short		43	45	47	49	51	53	54	56	58	60	62	64	65	65		
Medium		46	48	50	52	54	56	58	60	63	65	67	68	69	69		
Tall		49	51	53	55	57	59	61	64	67	70	72	72	73	73		
Av. an'l. gain (lbs.):																	
Short		3	4	5	5	5	4	8	9	11	14	13	7	3	3		
Medium		4	5	6	6	6	7	9	11	15	11	8	4	3	3		
Tall		5	7	7	7	7	8	12	16	11	9	7	3	4	4		

*Prepared by Bird T. Baldwin, Ph. D., Iowa Child Welfare Research Station, State University of Iowa, and Thomas D. Wood, M. D., Columbia University, New York City.

III

SCHOOL LUNCH PREPARED AT HOME

The noon meal is only a part of the day's menu and should be planned accordingly. The breakfast menu and the evening meal must be considered. Lunch means "a light (not heavy) meal between breakfast and dinner." If the noon meal is a lunch, then breakfast should be a hearty meal, and the evening meal should be "dinner." At any rate the children should have plenty of vegetables and milk at this meal. If the noon meal is a cold lunch, then breakfast and dinner should be most generously planned.

A noon lunch for school children should consist of easily digested foods, but should include building materials as found in milk (and milk products), eggs, fresh vegetables and fruits and in well-baked breads. Fresh fruit in season is best but canned fruit is second best. Cake, pie, meat and other rich foods are not necessities in the school lunch. If fresh fruit is scarce, grated or shredded raw vegetables, generously used in sandwiches or salads, help to make a good substitute.

For a basket or box lunch the most feasible suggestions are sandwiches, fruit, a bottle of milk, and a dessert.

Bread.—Whole wheat or white yeast bread, graham muffins, steam brown bread, corn bread (sliced thin), or nut bread. Raisins, dates, peanuts, pecans, coconut, pineapple or orange peel may be used to vary muffins or breads.

FRUITS AND VEGETABLES BY WAY OF THE SANDWICH

Lemon juice and orange juice used in almost all dressings for fillings add a delightful flavor and appetizing quality. They also help in the digestion of the other foods used. The vitamin content of these fruits is valuable.

Fillings for sandwiches furnish a splendid opportunity for teaching children to like fresh raw vegetables which are far superior, in mineral salts, vitamin content and laxative effects, to cooked vegetables.

Fruit fillings help the child to get his sweets from nature's sugar bowl, rather than from the candy box or from granulated supply.

Nuts, cheese and meat are best given in finely divided form—usually grated or ground and combined with other foods—not eaten alone.

Sandwiches in the Lunch

For convenience, sandwiches are almost necessary in the packed lunch. Bread should be 24 hours of age and should be spread with softened (not melted) butter. Dressing should be put not on the bread but inside the lettuce or other material. Raw fillings should be shredded or grated or ground in a chopper. Sandwiches should be well wrapped in oiled paper

to prevent drying. The child should be taught to eat the sandwich slowly. Bread requires thorough chewing.

(1) **Fillings for Sandwiches.**—Grated cheese or egg, fresh cottage or cream cheese in various combinations, butter, peanut butter (home-made).

(2) Shredded lettuce, cabbage, endive, or other tender leaves, pimento, grated carrot, beets, sliced pineapple, onion, banana, figs, tomatoes, raisins, prunes, dates.

(3) Pecans, peanuts, coconut (fresh).

If vegetables have been used in the sandwiches, fresh or canned fruit may be added to the lunch. A small amount of jelly, jam, marmalade, or fruit butter may be used, but fruit in its natural state is best for the child. Fruit juices, fresh or canned, are appetizing as well as nutritious. Fresh orange, lemon, lime, grape, blackberry or blueberry juices and many other fruit juices in Florida make it possible to have on hand a supply of fresh juices many months of the year.

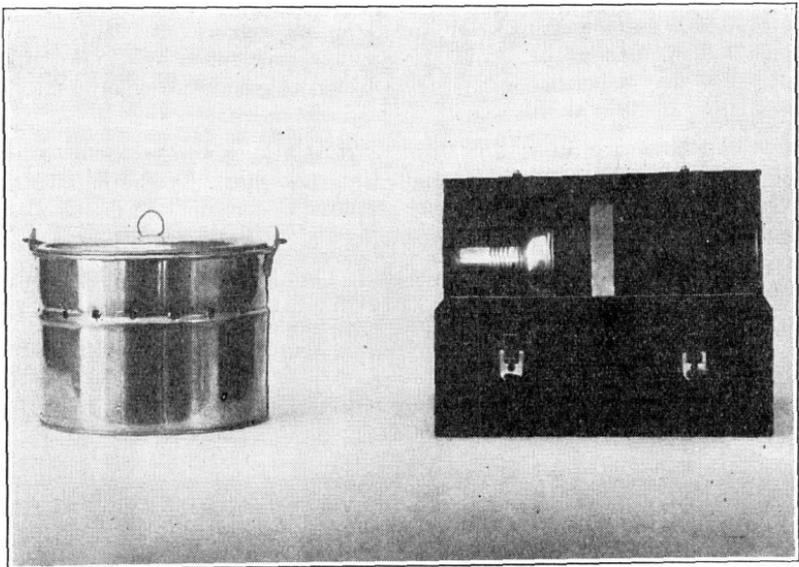
Milk.—Bottled milk (pt. or $\frac{1}{2}$ pt.). It is best where possible to provide an ice box and have milk handled at the school. A thermos bottle, although expensive, is worth the price, if milk is not supplied in the lunch room.

Dessert.—Milk cup custard (baked), plain or fruit cookies, ginger bread, oatmeal cookies, crystallized citrus fruit, fruit paste, fruit nut loaf, fresh Florida fruits in season.

CONTAINERS FOR COLD LUNCH**Requirements**

1. Easily cleaned. Daily scalding.
2. Conveniently handled.
3. Well ventilated.

Tin folding boxes or tin buckets well perforated for ventilation are easily kept in a sanitary condition. They should be scalded daily. A perforated box or bucket must be lined with paraffin paper to prevent dust from reaching the food.



Satisfactory Lunch Containers.

EQUIPMENT FOR CONTAINERS

1. Supply of oiled or paraffin paper for wrapping food.
2. Paper napkins.
3. A small container with lid—paper containers are convenient.
4. Spoon.

PACKING

1. The food, wrapped well in oiled paper, should be packed closely in the order in which it is to be eaten—the dessert in the bottom of the box.
2. The child easily learns to pack his own lunch.

SCORE FOR SCHOOL LUNCH FROM HOME

Container—

Appropriateness	5	.....
Cleanliness	10	.....
Ventilation	5	.....	.....

Packing—

Order	5	.....
Wrapping	5	.....
General Appearance.....	5	.....	.....

Contents—

Fresh fruit or raw vegetables.....	15	.....
Other fruit or vegetables.....	10	.....
Preparation of food.....	20	.....
Milk	20	.....
Total .....		.....	.....



"It's no trouble to carry. It's 'balanced.'"

RECIPES

Grated Carrot, Onion and Yellow Turnip Sandwich

Large—16 servings of 1 sandwich each.

(3 teaspoons vegetables—1 sandwich).

1 cup grated or ground vegetables	$\frac{1}{4}$ cup butter
4 tablespoons grated raw apple	4 tablespoons vegetable oil
1 teaspoon salt	24 thin slices bread

Wash vegetables, grate or put through food-chopper, using fine knife. Add apple and salt. Add mayonnaise to vegetables. Cream the butter. Cut the bread very thin. Spread butter on bread. Place vegetable mixture between sliced bread. Cut the sandwich in half.

Ground Celery or Cabbage Sandwich

Large—16 servings of 1 sandwich each.

1 cup ground vegetables	$\frac{1}{4}$ cup butter
4 tablespoons ground pineapple	24 thin slices bread.
1 teaspoon salt	

Run the vegetables and pineapple through food-chopper, add salt. Cream butter, add to vegetable mixture and mix thoroughly. Cut bread very thin. Spread mixture on a slice of bread, place another slice of bread on top. Cut sandwich in half. Butter may be spread on slices of bread. Vegetable mixture moistened with dressing is then placed between slices.

Other Vegetable Fillings

1. Lettuce. Use butter on bread and salad dressing between lettuce leaves.
2. Tomato, bacon and lettuce.
3. Grated carrots and shredded lettuce.
4. Finely ground cabbage and grated carrot.
5. Ground celery and peanuts.

Fruit Fillings

Fig or guava paste, orange marmalade, honey, grated pineapple, raisins, apricots, peaches, dates, prunes or any number of fresh fruits in season may be used. Chopped stewed figs flavored with lemon juice or any of the dried fruits moistened with fruit juice make an appetizing spread on buttered bread. The following combinations are good:

Raisins and peanuts ground and moistened with grape juice or lemon juice; dates ground to a paste moistened with orange juice; peanut butter moistened with honey or cream; any of the fruit fillings combined with cottage cheese.

A yellow sandwich filling is made by grating orange rind and working it into butter. Season with orange or lemon juice.

Pecans, black walnuts, peanuts, or coconuts combine well with vegetables and fruits. Equal quantities peanut butter and ground raisins mixed with half as much butter makes a good combination spread.

Eggs, Cheese, Meat

When cooked below boiling point, eggs are tender and easily combined with other foods for sandwich filling. Cheese, grated or cooked at a low temperature in combination with other materials, adds needed protein of attractive flavor. Eggs and cheese thus help to meet the body needs and to save excess use of meat.

Boiled Salad Dressing

3 tablespoons vegetable oil or butter	$\frac{1}{2}$ cup vinegar
1 tablespoon flour	1 teaspoon salt
1 tablespoon sugar	1 teaspoon mustard
1 cup sweet milk	$\frac{1}{8}$ teaspoon cayenne
	2 eggs.

Stir the dry ingredients into the oil which has been put into a double boiler top. Add the milk and cook, stirring constantly until the mixture takes on the consistency of cream. Beat the egg yolk slightly, add vinegar, pour into the first mixture and cook until thickened, stirring constantly. Chill and fold in the beaten egg whites. This dressing may be stored for some days, if kept in a tightly covered glass jar in a cool place.

French Dressing

6 tablespoons vegetable oil	$\frac{1}{3}$ teaspoon salt
2 tablespoons vinegar	Few grains each paprika and pepper.

Combine the ingredients in order given, beat well and serve.

Breads

Recipes for sandwich breads and variations of yeast breads may be found in Circular 973, Florida State College for Women. The following recipes for quick breads will add variety, flavor and nourishment. Muffins, cookies, fruit and nut combinations will easily take the place of rich cakes and pastries and even of the cheap sweets offered at many lunch counters.

Bran Muffins

$\frac{3}{4}$ cup bran	$1\frac{1}{4}$ cups graham flour or equal
$1\frac{1}{2}$ teaspoons salt	parts graham and white flour.
2 teaspoons baking powder	2 tablespoons brown sugar or dark
1 egg	molasses.
$\frac{3}{4}$ cup milk	3 tablespoons shortening.

Mix all dry ingredients well together; add egg, melted shortening, molasses (if used) and milk to make a soft batter. Beat well until thor-

oughly mixed. Half fill each greased muffin tin and bake in hot oven (425°F.) about 20 minutes. (Sugar or molasses may be omitted.) This is a delicious as well as most wholesome muffin.

Blueberry Muffins

2 cups flour	3 teaspoons baking powder
4 tablespoons sugar	$\frac{1}{2}$ teaspoon salt
2 eggs	1 cup milk
4 tablespoons melted shortening	1 cup blueberries

Sift together flour, baking powder, sugar and salt; add eggs, milk, melted and cooled shortening to make a stiff batter; mix all together well. Add blueberries which have been washed and drained. Half fill small greased muffin rings or tins and bake in moderate oven (375° F.) for 30 minutes. Canned blueberries carefully drained may be used. Other fruits may be substituted for blueberries.

Oatmeal Cookies

1 cup brown sugar	1 cup oatmeal
$\frac{1}{3}$ cup butter (or substitute)	3 cups flour
2 eggs	$\frac{1}{4}$ teaspoon soda
$\frac{1}{2}$ cup sour milk	1 teaspoon salt
1 teaspoon cinnamon	$\frac{1}{2}$ teaspoon nutmeg
$\frac{1}{2}$ cup raisins	$\frac{1}{2}$ cup nuts

Mix and sift dry ingredients and add raisins and nuts. Cream butter and sugar, add beaten eggs and milk and remainder of ingredients mixed. Drop by teaspoonfuls on greased pan and bake in moderately hot oven.

Peanut Cookies

1 cup flour	1 teaspoon lemon juice
$\frac{1}{2}$ teaspoon salt	1 cup chopped peanuts
1 teaspoon baking powder	$\frac{1}{2}$ cup sugar
2 tablespoons shortening	$\frac{1}{4}$ cup milk
	1 egg

Sift dry ingredients together. Add melted shortening to beaten egg. Add milk and lemon juice, and mix well with the dry ingredients to make soft dough. Add peanuts; mix well and drop with teaspoon on greased pan. Bake in moderate oven (400° F.) about 20 minutes. This recipe makes about four dozen small cookies and requires 1 quart of peanuts.

Scotch Fingers

2 cups rolled oats	$\frac{1}{4}$ cup milk
2 teaspoons baking powder	$1\frac{1}{2}$ tablespoons melted butter
$\frac{1}{2}$ teaspoon salt	$\frac{1}{4}$ cup sugar
	$\frac{1}{4}$ cup molasses

Grind rolled oats in the food chopper; mix with salt, baking powder and sugar. Stir in milk, molasses and butter. Mix well. Roll out in a very thin sheet, and cut into narrow oblongs. Flour board with ground rolled oats. Bake 20 minutes in moderate oven (375° F.).

Butter Scotch Cookies

To 2 eggs beaten well, add 2 cups light brown sugar and $\frac{3}{4}$ cup melted butter. Mix thoroughly. Mix $3\frac{1}{2}$ cups flour with 2 tablespoons baking powder and $\frac{1}{2}$ -teaspoon salt. Add through a sifter to the egg mixture. Then add 1 tablespoon vanilla and 1 cup chopped nuts and mix well. Shape the dough into a cylinder and place in the icebox over night or for several hours. Cut into thin slices and bake on an oiled pan or baking sheet at 375° F. for 10 or 12 minutes. This makes 40 to 50 cookies.

Graham Date Bread

1 cup brown sugar	2 cups sour milk
1 teaspoon salt	1 teaspoon soda
1 cup graham flour	1 cup white flour
1 cup chopped dates	2 teaspoons baking powder

Add the milk to the sugar, stir until dissolved; add the sifted dry ingredients and lastly the chopped dates. Pour into a well-greased bread pan and let rise 20 minutes. Bake in a moderate oven one hour.

Nut Bread

$1\frac{1}{2}$ cups whole wheat flour	$1\frac{1}{4}$ cups sweet milk
$\frac{1}{2}$ cup sugar or	$1\frac{1}{2}$ cups white flour
$\frac{1}{4}$ cup sugar plus $\frac{1}{2}$ cup raisins	6 teaspoons baking powder
1 teaspoon salt	1 cup chopped nuts or
1 egg	1 small jar of peanut butter

Add the sifted dry ingredients to the whole wheat flour. Add the nuts, the eggs and the milk. Mix into a smooth dough. Turn into a well-greased loaf pan and let stand 15 minutes. Bake in a moderate oven 45 minutes, or steam in baking powder cans two hours.

Small Fancy Cakes

$\frac{1}{2}$ cup butter	$\frac{2}{3}$ cup milk
2 cups flour	3 teaspoons baking powder
1 cup granulated sugar	1 teaspoon vanilla
$\frac{1}{4}$ teaspoon salt	3 egg whites

Cream the butter and sugar together until light. Add the milk slowly and beat constantly. Add the flavoring, then stir in the sifted dry ingredients. Fold in the beaten egg whites. Fill small muffin tins or pleated paper baking cups about three-fourths full and bake in a hot oven from 10 to 15 minutes.

Florida Fruit Cake

2/3 cup fat	1 teaspoon cinnamon
1¾ cups sugar	½ teaspoon nutmeg
4 egg yolks	½ teaspoon allspice
1 cup crushed pineapple and juice	2/3 cup raisins
2½ cups flour	½ cup nut meats
2 teaspoons baking powder	4 eggs
1 teaspoon cloves	

Cream fat and sugar, add egg yolks, beat well. Add pineapple (not necessary to separate juice from fruit); add flour to which has been sifted all the spices, gradually. Fold in egg whites, which have been beaten dry. Add raisins; mix well; pour into greased, paper-lined tins. Sprinkle nuts, which have been heated, over top of each layer. Bake in moderate oven (350° F.) 40 minutes.

Pineapple-Coconut Cake

10 tablespoons butter	canned
1 7/8 cups sugar	2½ cups soft wheat flour
4 eggs	3 teaspoons baking powder
1 cup grated coconut—fresh or dry canned	1 teaspoon vanilla
	1 cup (9-oz. can) grated pineapple

Cream the butter with the sugar; add well-beaten egg yolks. Beat until mixture is light and add pineapple (do not drain off the juice); then the flour sifted several times with the baking powder. Add the vanilla and one-half of the coconut, fold in the egg whites, turn into greased layer cake pans. Sprinkle the remaining coconut over the tops and bake in a moderate oven 350° F.

Blueberry Gingerbread

1½ cups ripe blueberries	1 cup sour milk
2½ cups flour	1 egg
¼ teaspoon soda	1 cup molasses
¼ cup melted fat	1 teaspoon salt
2 teaspoons baking powder	1 teaspoon ginger

Heat molasses, add fat, and cool slightly. Stir in the sour milk and beaten egg. Sift flour, salt, baking powder, soda, ginger and stir into the liquid mixture. When smooth, add floured berries and pour into well-greased shallow pan. Bake about 30 minutes in moderate oven. Other fruit may be substituted for blueberries.

IV

SUPPLEMENT FOR THE HOME PREPARED SCHOOL LUNCH

In the small rural school, the lunch project meets many doubters. The teacher has more duties than she can meet. How can she do any more? Lack of money, lack of service, lack of time! A small beginning is better than no beginning. The following plan is at least a beginning:



A vegetable stew, lettuce sandwiches, milk and a Florida orange make a satisfactory meal for this high school girl.

Gain the interest in school lunches by having the children eat properly the cold lunch, observing the following items:

1. Wash hands.
2. Sit at desk while eating.
3. Take plenty of time.

If it is possible to go further, have a lunch room fitted with tables and chairs or benches where the lunch brought from home may be enjoyed.

The next step in school lunch evolution is the hot dish supplement.

1. Milk or fruit.
2. Hot dish.

Home lunches are often lacking in milk, in vegetables or in fruits. To supplement this lunch, using a minimum of time and equipment, is the problem.

Secure or make an ice box and handle bottled milk at the school.

During more than half the school term in more than half the state, oranges are in season. They can be easily handled at a nominal price by the school for the children who cannot bring them from home.

Fruit juices of many varieties may be prepared in season by girls' home demonstration clubs for use in the school lunch.

The next step in school lunch evolution is the hot dish supplement. Why does the child need the hot dish? What does it do? Experience shows that the hot supplement serves as follows:

- a. Encourages variety. Helps to overcome idiosyncrasies in taste.
- b. Aids digestion.
- c. Tempts the appetite.
- d. Serves as a demonstration of well-prepared, well-selected food.
- e. Forms a basis for teaching pupils food values, food preparation, business management, team work and manners.
- f. Serves as a means of bringing children up to average weight.
- g. Gives opportunity for correlation of nutrition and health work with other school subjects—arithmetic, history, language, and geography.

The school lunch problem has existed since schools began. Its solution is a necessary school activity worthy of the support of the school board, teachers, children and community. The agency through which the school lunch comes into existence is usually a girls' or women's club working with a teacher or teachers. The final authority should be the principal of the school.

The history of the school lunch is usually made in three epochs, as follows:

1. The cold lunch—improved.
2. The hot dish supplement.
3. The school lunch.

Where there are no children old enough to prepare a hot dish at school, the pint jar type of lunch has been used according to the following plan:

1. Each child brings to school a pint jar filled with soup or a vegetable mixture that may be reheated.

2. At recess the jars are placed on a rack or in a boiler containing one inch of water.

3. The boiler is set on the school stove or on a two-burner oil stove. The food will easily heat by noon.

This method saves work and time at school. It is economical in that there is no waste, and in that there is a very small investment in equipment. The food, however, is not always well planned nor is it always palatable. This method offers no opportunity for teaching food selection and preparation.

THE HOT DISH SUPPLEMENT

Children who eat cold lunch every day at school tire of the food and fail to eat enough. Weighing and measuring the school children will nearly always furnish a reason for asking the community to work for a hot lunch. Working together for a hot lunch often brings the community, the school, and the organizations together.

Parent-teacher associations, women's home demonstration clubs, girls' home demonstration clubs, or any other organization may arouse the interest by the following methods:

1. Study conditions, finding out how the children eat, and what they eat when they bring the cold lunch.
2. Learn the number of underweights.
3. Present at the general meeting the subject of child feeding and the value of the hot dish at school. Present also a list of equipment needed and a general plan for beginning the work.

I. PRELIMINARY WORK

1. Appoint a hot lunch equipment committee, composed of the following officers:
 - a. Teacher or principal.
 - b. President of girls' home demonstration club.
 - c. President of women's home demonstration club.
 - d. One member parent-teacher association.
 - e. President boys' club.
 - f. One school director.
2. Secure equipment by means of—
 - a. Money set aside by school board.
 - b. Money realized from school, club or community entertainment.
 - c. Community shower.



The Women's Home Demonstration Club, Brandon, Florida, operates this lunch-room. Food is served from within—hot dishes, bread and butter, dessert and the drink last. Bottled milk is the popular drink.



The lunch room outgrew itself and these boys and girls are enjoying the lunch out-of-doors. Two Club girls supervise each table. All Club girls in this community are carrying the long-time nutrition program.

3. Select equipment from the following list to supply the demand:

(1) General

1 two-burner oil stove	1 food grinder and tray
2 asbestos mats	1 mixing bowl (4-qt.)
1 oil can	1 potato masher
1 granite kettle with cover (10-12 qts.)	1 flour sifter
1 large sauce pan with handle (5-8 qts.)	1 salad mixing set
1 double boiler	1 ladle (½-pt.)
2 teaspoons	1 vegetable brush
2 tablespoons	1 can opener
2 paring knives	1 water bucket
½ pt. glass measuring cup	1 large pitcher
1 qt. measure	1 dipper
1 case knife	1 garbage can
1 long handled spoon	1 oil cloth
1 wash basin	1 cupboard 18x24x42"
8 or 10 qt. pressure cooker	Containers, large baking powder cans, pt. or qt. fruit jars.

(2) Cleaning

2 dish pans, 16 or 18 in. diameter	Pot lifters
12 dish towels (flour sacks)	Soap
2 dish cloths	Cleanser

(3) Staple Supplies

Flour	Salt
Sugar	Spice
Cocoa	Soap
Soda	Cleaning Powder
Rice	Cornstarch

II. PLAN OF ORGANIZATION

- Chairman, teacher or teachers who serve in turn.
- Committees of boys and girls who serve periodically in various positions.
- Manager—employed when the activities outgrow the volunteer system. Committees and teachers continue in service.

III. METHOD OF OPERATION

- The committee on preparation should:
 - Plan menus with teacher.
 - Check supplies. Make list of needed articles.
 - Apportion supplies to be furnished by pupils. Get a signed permit from the teacher to buy other supplies needed.

- d. Go to school early or work at recess one week. (Not more than 20 minutes school time should be occupied in preparing the hot dish.)
- e. Prepare one hot dish or reheat the dish brought from home and have it ready on time.
- f. If pupils have trays, the preparation committee can easily serve each as he passes by in line.
- g. When using a fireless cooker, the cooks may prepare the cooker during the last 20 minutes in the afternoon, if the cooking is to be done over night. The first 20 minutes in the morning should allow time enough if the cooker is to be prepared then.
- h. If no fireless cooker is used, dishes requiring a long slow process should be cooked at home.
- i. Be absolutely neat as to hair, hands, nails, clothes; allow no tasting from cook spoons.
- j. Keep record of money or supplies received.
 - k. Pay bills.
 - l. Balance accounts weekly.
 - m. Make report.
2. Committee on serving: Two pupils can serve 24 people.
 - a. Absolute cleanliness required; hair neat; hands scrubbed.
 - b. Set out individual dishes.
 - c. Place napkins on desk (if desks are used). Place spoon or fork at right.
 - d. Serve hot dish.
- e. No pupil with a cold should serve.
3. Committee on cleaning: Two people are needed for 24.
 - a. Be ready with hot water.
 - b. Have each child return his dishes to table.
 - c. Wash dishes and return to cupboard.
 1. Use clean hot soap suds.
 2. Rinse in boiling water.
4. Committee on housekeeping:
 - a. Air room thoroughly before lunch hour.
 - b. See that all hands are washed before lunch, that each child awaits his turn and waits until all have finished before leaving desk or table.
 - c. Inspect desks or tables.
 - d. Clean stove, sweep if necessary.
 - e. Put room in order.
5. Committee on weighing and measuring.
 - a. Weigh each child monthly.
 - b. Measure each child tri-monthly.
 - c. Check individual cards or wall charts.
 - d. Check children drinking at least one pint of milk daily.

RECIPES

Tomato Soup

1 qt. can tomatoes	$\frac{1}{2}$ cup fat
$\frac{1}{2}$ teaspoon soda	$\frac{1}{2}$ cup flour
$\frac{1}{4}$ teaspoon salt	6 cups or $1\frac{1}{2}$ qts. milk
1 small onion	$\frac{1}{4}$ teaspoon pepper
	$\frac{1}{2}$ teaspoon celery salt

Heat tomatoes and mash well with fork or potato masher. Add soda, onion, salt, fat, and flour mixed with equal amounts of cold water and boil five minutes to cook starch in flour, stirring constantly to prevent lumping and burning. Scald milk in double boilers and just before serving turn hot tomato mixture gradually into the hot milk, stirring all the time to prevent curdling. Season and serve immediately. (Serves 12.)

Cream of Vegetable Soup

SMALL	LARGE
$\frac{1}{2}$ cup milk	3 qts. milk
$\frac{1}{4}$ cup any cooked, seasoned and sifted vegetable	$1\frac{1}{2}$ qts. any cooked, seasoned, sifted vegetable
1 teaspoon flour	1 cup flour
$\frac{3}{4}$ teaspoon butter	$\frac{3}{4}$ cups butter
	Salt

Heat milk over double boiler. Melt butter, stir in flour. Blend until smooth. Add milk slowly, stirring constantly. Add salt, bring to boil, remove from fire at once. Have vegetables and sauce hot. Combine before serving. (Serves 24.)

Vegetable Soup

SMALL	LARGE
$\frac{1}{4}$ cup milk	2 qts. milk
1 tablespoon chopped carrots	3 cups chopped carrots
1 tablespoon chopped celery	3 cups chopped turnips
1 tablespoon chopped potatoes	3 cups chopped celery
1 tablespoon chopped turnips	6 cups chopped potatoes
$\frac{1}{2}$ teaspoon onions	1 cup chopped onion
1 teaspoon butter	$\frac{1}{2}$ cup butter or substitute fat.
$\frac{1}{4}$ cup vegetable water	

Cook chopped vegetables until tender in boiling salted water. Add to the milk all the vegetables and one quart of the water in which they were boiled. Allow soup to simmer a few minutes. Add butter and serve. To make vegetable soup with stock, replace the milk with stock. (Serves 24.)

Scotch Soup**SMALL**

1 tablespoon rolled oats
 1 cup water
 2 tablespoons potatoes cut in small pieces
 ½ minced onion
 1 teaspoon flour
 1 teaspoon fat
 Salt

LARGE

10 qts. of water
 5 cups of rolled oats
 20 potatoes cut in small pieces
 4 onions sliced
 ½ cup flour
 ½ cup fat
 2 tablespoons salt.

Cook the oatmeal over boiling water two and one-half hours. Add the potatoes and onions and cook another half-hour. Brown the flour with the fat. Add to the soup and cook until thick. (Serves 24.)

Beef Stew

4 lbs. chuck
 1½ pts. carrots
 2 qts. potatoes
 4 qts. water

Cut beef in two-inch cubes. Cover with two and one-half quarts of cold water. Simmer until tender, about 1½ hours, depending upon the quality of meat. When tender add carrots, which have been scraped and cut into small cubes. Add potatoes, peeled, cut into rather large cubes. Add salt to taste. Add remainder of water; if necessary add more water. When all are tender, add one-half cup of thickening. Let boil a moment and it is ready to serve. The above will serve about 25 portions, approximately 6 ounces each.

Lamb Stew

4 lbs. lamb
 2 qts. potatoes
 4 cups cut carrots
 2 onions
 2 cups peas
 2 tablespoons salt
 ½ teaspoon pepper
 2 tablespoons flour
 4 tablespoons chopped parsley

Wipe meat, cut into small pieces, put in kettle, cover with boiling water, and boil slowly 1½ hours; add carrots, and onion; boil 15 minutes, then add potatoes, salt, pepper and tomatoes. Add boiling water, if needed to cover vegetables, and boil 30 minutes. (Serves 24.)

Spanish Rice

2 cups chopped meat
 2 No. 3 cans tomatoes
 2 chopped onions
 6 cups boiled rice

Broil chopped meat and onions in pan; boil rice. Then place first layer of broiled meat and onions in pan, second layer of tomatoes, then meat and onions and rice alternately in layers until the material is used. Bake 30 minutes. (Serves 12.)

Cream of Lima Bean Soup

1½ cups dried lima beans	6 tablespoons butter
2 tablespoons chopped onion	4 tablespoons flour
1½ qts. cold water	1½ qts. milk.
1 or 2 tablespoons tomato catsup	Salt and pepper to taste

Soak beans over night, drain. Add water and onion (also a little celery, parsley and carrot if possible) and cook slowly for 3 hours or until soft. Rub through sieve. Make white sauce out of butter, flour and milk. (Serves 12.)

Split Pea Soup

2 cups split dry peas	1 small onion
2 cups cold water	1 qt. white sauce
1 qt. ham or corned beef stock	Season to taste.

Soak peas over night, drain. Cook peas and onions in water and cook slowly for 3 or 4 hours or until very soft. Rub through sieve and add to hot white sauce. Navy beans may be used in the same way. (Serves 12.)

Baked Bean Soup

1 qt. cold baked ham	2 cups sliced and strained tomatoes
2 qts. cold water	3 tablespoons butter
4 tablespoons sliced onion	3 tablespoons flour
3 stalks celery or dry celery leaves	Seasoning to taste.

Cook beans, water, onion and celery together slowly for 30 minutes and rub through sieve, add tomato, thicken with butter and flour cooked together. (Serves 12.)

Corn Chowder

2 cans corn	1 qt. boiling water
1½ qts. potatoes	2 teaspoons salt
¼ lb. salt pork cut in small cubes	¼ teaspoon pepper
2 onions sliced	2 qts. scalded milk.
Crackers	

Fry the pork and brown the onion in the fat. Cut potatoes into thin slices, and add to the onion. Add boiling water and cook until potatoes are tender. Add corn and milk and bring to boiling point. Add seasoning and crackers. Serve immediately. (Serves 20.)

Potato Souffle

Large pan of well-mashed, well-seasoned potatoes.
One egg for each child.

Beat into potatoes, one egg for each child. Return to oven and heat; brown slightly.

Cocoa Syrup

SMALL	LARGE
1 cup milk	3 qts. milk
2 teaspoons sugar	$\frac{1}{2}$ cup sugar
1 cup water	3 qts. water
Pinch of salt	1 teaspoon salt
1 teaspoon cocoa	$\frac{1}{2}$ cup cocoa.

Scald milk over double boiler. Mix cocoa, sugar and salt and dilute with enough boiling water to make a smooth paste. Add remaining water and boil one minute. Turn into the scalded milk and beat two minutes, using Dover egg beater. This will form a froth and prevent the scum which makes awkward to serve and to drink.

Creamed Dishes

Potatoes	Onions
Cabbage	Meats
Celery	Eggs
Carrots	Macaroni.

Almost any vegetable cooked in a small amount of water until tender is a good basis for a creamed dish. Combine water drained off with milk for making a cream sauce. Brown flour in a hot oven for use in brown cream sauces. The flour is then well cooked and it also gives good flavor.

Medium White Sauce

2 cups liquid	2 tablespoons butter
4 tablespoons flour	2 teaspoons salt

Melt the butter in a sauce pan; add flour, blend well. Add liquid gradually. In making a large quantity of white sauce, scald milk before combining with flour and fat. Blend flour and fat with small amount of cold liquid. After hot milk is added, cook five minutes. Stir constantly.

Creamed Potatoes and Celery

2 cups diced steamed potatoes	1 tablespoon grated cheese
2 cups milk	1 cup chopped celery
4 tablespoons flour	4 tablespoons melted butter
	2 teaspoons salt.

Mix the diced potatoes and the celery together. Make a cream sauce by blending the flour, butter and salt, adding the warm milk slowly. Bring to a boil and pour over the diced potatoes and celery. Place all in a baking dish and sprinkle the grated cheese over the top. Bake until nicely browned.

Italian Macaroni

1 cup macaroni (cooked until tender)	Salt and pepper.
	$\frac{1}{2}$ chopped onion
1 chopped green pepper	1 cup cooked meat
1 cup tomato sauce	$\frac{1}{2}$ cup cheese

Drain macaroni. Add tomato sauce and other seasonings. Cook 10 minutes. Add meat. Place in a casserole. Add cheese, cut finely and bake until cheese is partly melted.

Creamed Eggs on Toast

12 hard cooked eggs	$\frac{1}{2}$ teaspoon pepper
4 tablespoons butter	$3\frac{1}{2}$ teaspoons salt
4 tablespoons flour	24 slices toast
	4 cups milk.

Cook eggs in water just below boiling point 12 minutes. Make a thin white sauce with butter, flour, milk and seasonings. Chop eggs and add them to the sauce. Cut slices of toast in halves lengthwise. Arrange on platter, and pour over the sauce. (Serves 24.)

V

ORGANIZATION AND ADMINISTRATION OF THE SCHOOL CAFETERIA

**By Anna May Tracy, Dietitian, and Associate Professor of
Institution Economics, Florida State College for Women**

In the consolidated rural schools, and in the city high schools with their long, single sessions, and short lunch periods, the home lunch, supplemented by the single hot dish, no longer suffices for the adolescent child. The community must now consider the school lunchroom, a separate department within the school, where the child can get a wholesome meal at a reasonable charge, under controlled conditions.

The lunchroom is essentially a part of the school system. It is an educational factor in that it gives opportunity for presenting problems in applied nutrition. It is also a factor in the social life of the school. Good table manners, consideration for the rights of others, respect for public property may all be vitalized for the child in the lunchroom. Experience has shown that while it may be necessary for a civic organization or community group to sponsor the initial lunchroom, "Ultimately the lunchroom should be under the direction of the school authorities, and all overhead expenses should be supplied from school funds."¹ A study of many lunchrooms in Florida and elsewhere shows that the initial installation of equipment is usually provided for by school boards, just as is equipment for other educational agencies, but that lunchrooms are expected to be self-supporting in operation.

The work of the lunchroom manager, then, is both educational and administrative. She may be guided and helped with nutrition problems by the home demonstration agent and the home economics teacher; the teachers and student organizations may aid in the social control of the room, but the business control is, in most cases, the sole responsibility of the manager. She alone is responsible to the lunchroom committee, or to the school board for the financial status of the organization. With a view to giving the manager some guidance and help with administrative problems, the following outline has been made. It is suggestive only; references to more complete information are given in the bibliography.

I. The work of the lunchroom must be well organized. By organizing we mean dividing the work into parts small enough so that one person can be held responsible for the conduct of each part or division. The division of work should be made in such a way that all parts will work together for the good conduct of the work as a whole.

¹FISHER—*The Lunch Hour at School*, page 11.

II. In order to make this division of work wisely, the manager should first list the functions or "jobs" that must be handled in the lunchroom. The list of functions will be somewhat as follows:

1. Buying, storing, and menu making.
2. Supervising.
3. Cooking.
4. Serving.
5. Dishwashing, and cleaning.
6. Checking and cashiering.
7. Record keeping.
8. Dining room care.

III. With the list of functions set forth, the manager should next determine the number of people necessary to carry out each function. The number of employees will be determined by the number of people to be served, the length of the lunch period, the type of menu, and the equipment available. For example, in determining the number needed to serve at the counter, such factors as the following must be considered:

1. Will the entire group come at one time? If so, a larger number of counter people will be needed for a shorter time than if the group comes in small lots over a long lunch period.

2. Will the articles served be of such nature that little serving is necessary during the lunch period? Salads, desserts, sandwiches that are portioned out before the opening of the lunch period can be served faster, and need fewer counter people than hot dishes that must be served as ordered.

3. How fast will the students move along the counter? "The desirable rate of service at one counter is 14 pupils per minute."¹

The factors affecting each function must be listed in a similar way. It is impossible to set forth a ratio of employees to the number to be served that will fit every situation. Each manager must work out for herself the number she needs. She will find a study of similar lunchrooms of help to her in this problem. Miss Smedley says, "it is usually considered as a basis for calculation, for the type of menu served in the Philadelphia schools, that one worker is necessary to a school with a hundred pupils, or up to one hundred and twenty-five. For a school with a hundred and fifty pupils, one full time and one half time workers are necessary. The number of workers will not increase, however, in exact ratio to the number of pupils, as the proportion of workers naturally decreases with the increase of persons served."²

¹FORD—*Some Administrative Problems of the High School Cafeteria*, page 122.

²SMEDLEY—*The School Lunch*, page 55.

A cafeteria in Danville, Va., reports that for serving 500, four full time workers are employed, and 20 students and teachers assist at the serving hour.¹ The schools in Erie, Penna., have employees as follows, in addition to two cashiers:

School	Number Served.	Workers, Including Manager.	Student Helpers at Counter During Serving Time.
1.....	1,400	15	14
" 2.....	600	6	2
" 3.....	800	7	12
" 4.....	400	4	4
" 5.....	600	5	3
" 6.....	500	7	2

IV. Having made a list of functions, and determined the number of employees necessary, the manager will next make a schedule of work. This schedule should set forth the duties of each employee, the best method of doing his work, and specific information as to what is expected of him. The schedule for each employee should be posted near the person's work station. For example, a salad maker's schedule might be as follows:

Agnes Smith.

On duty 9:00 a. m.

Read menu for day's salads.

See ice box for left-overs.

Bring list of supplies needed to manager by 10:00 a. m.

Prepare day's salads according to recipe on file.

Have counter set up by 11:30.

Have counter apron and cap on and be in place for opening of doors at 11:40.

Keep six of each salad on counter at all times.

At close of serving hour, put left-over salads in ice box. Report on number of salads sold. Get own lunch.

Clean counter, supply drawers, and equipment and leave ready for next day's work.

V. Having made out a schedule for each employee, the manager should draw up regulations governing the conduct of all employees. These regulations should cover directions as to punctuality, kind of uniform required, standards of personal cleanliness required, and methods of work in general. Much confusion and waste of time and materials will be avoided if employees understand exactly what is expected of them, and exactly what their responsibilities are. Written directions are an aid to good management, as they make for accuracy and uniformity of work.

¹HOLLAND, MRS. S. E.—*School Feeding Management*, July 1928, page 10.

2. Prices. If accurate selling prices are to be determined, the manager must keep a record of the cost of all materials used, in order that the cost of any recipe can be figured. Costs are also needed in figuring inventories. Example:

Article	Package	Unit Cost
Sugar	100 lb. sack	.065 lb.
Eggs	30 doz. case	.38 doz.
Apples	box 163	.021 each

It is well to keep the unit cost figures in pencil so that they may be easily changed with the change in market.

3. Menus. Menus are often made out a week at a time. To avoid too frequent repetition, to plan with the week in mind rather than the day, a sheet giving a five day record should be used. With the week's menu in mind, the market list can be made and orders placed.

Dawson School Cafeteria Menu

Week of.....

	Mon.	Tues.	Wed.	Thurs.	Fri.
Soup					
Meat or Meat Substitute					
Potatoes					
Vegetables					
Salads					
Sandwiches					
Desserts					
Beverages					
Bread					

4. Recipes. The manager should use standardized large quantity recipes for all dishes. This insures uniformity of product, eliminates guess work, and enables the manager to know exactly how many por-

tions she can get from a given quantity. Recipes should be kept on cards of filing size, and employees instructed to use the cards when preparing dishes.

5. Cash handled. The cashier should make a report daily of the amount of money on hand for change, (the bank) the amount received for sales, and the total in the cash box.

Dawson School Cafeteria

Daily Cash Report

Date.....

	Dollars	Cents
Pennies		
Nickels		
Dimes		
Quarters		
Halves		
Silver Dollars		
Currency		
Total Cash Received.....		
Total Cash Register Roll.....		
Cash on Hand for Change.....		
Number Served.....		
Receipts for Day.....		
Signed		

6. Number of people served. Each manager will want a daily record of the number of people served. The record will guide her in planning future operations, in determining what days are peak days, and what days are low days.

7. Material on hand. Inventories are essential where monthly financial statements are made. They are necessary also as operative guides for the manager. She must know what food supplies are on hand in order to buy intelligently; she must have inventories of silver, china, and glass in order to determine the amount of breakage and loss. She will want an inventory of all equipment in order to determine the value of her department.

8. Employees' time. The manager will want a record of the time worked by all employees in order to make her pay roll.

9. Information concerning employees. The manager will want the name, address, and telephone number, of all employees on record in her office. She will want also the date of their employment, their recommendations, their salary, and their reasons for leaving.

DAWSON SCHOOL CAFETERIA	
Employees' Record Card.	
Year.....	
<hr/> <hr/>	
Name	Address.....
Position.....	Telephone No.....
Date Employed.....	Salary.....
Date of Leaving.....	
Reason for Leaving.....	
Kind of Service.....	

(Board of Health Examination Card should be clipped to this card).

A more complete discussion of record keeping will be found in *The School Lunch*, by Emma Smedley, and *Some Administrative Problems of the High School Cafeteria*, by Dr. W. S. Ford. Records and accounts, if they are to be more than memoranda, must be interpreted. It is not enough to know that receipts during May are less than those in April, but the manager must determine why there has been a drop. Are the sales fewer, or are market prices higher? Is the loss of silver due to carelessness in scraping dishes, or is the silver being carried out? Are the milk and vegetable sales evidence of good nutrition education?

VII. The manager with a well-defined organization, a carefully planned schedule of work, and a set of records sufficient for her needs, will then need to plan for supervision of work, and for the elimination of waste. In the small lunch room, the manager will do all of the supervising; in the large one she will delegate some of this task to an assistant. " * * * supervision is a fundamental prerequisite to the accomplish-

ment of collective results. Direction can plan the work; only supervision can insure its proper execution."¹ The manager will see that directions are being followed, work being done according to orders, absolute cleanliness maintained, discipline and order kept. The manager must guard against waste of material.

1. She must use standard recipes that will give her the needed number of portions.
2. She must know how many to prepare for by careful study of daily records. Left-overs will then be kept to a minimum.
3. She must give explicit directions for the use of left-overs.
4. She must buy only food supplies of good quality. This does not mean fancy quality, but means supplies of sound quality, and free from excessive waste.
5. She will buy staple goods in large units, with consideration of her storage space.

The manager must guard against waste of time.

1. She will save time of workers by having adequate equipment in good repair.
2. She will save time by having supplies on hand. She will not have workers sitting around waiting for material.
3. She will save time by teaching workers to work efficiently, that is, to make no false motions.
4. She will save time by having an "understudy" for each employee; that is, she will have someone ready to step into the place of an absent employee, so that no time will be wasted in training a new person.
5. She will have her own work for the day carefully scheduled.

VIII. Every manager should acquaint herself with the local and state regulations in regard to public eating places. These regulations will cover items pertaining to the physical examination of employees, toilet facilities, screening, and other sanitary measures.

IX. The good management of a school lunchroom necessitates:

1. A manager trained for the work she is doing, and with sufficient authority to carry into effect the policies she deems wise.
2. A carefully worked out organization, with clearly defined duties and responsibilities.
3. An accurate and usable set of records and accounts.
4. A staff of loyal employees.
5. The co-operation of the principal and teachers of the school.

X. Equipment recommended for cafeterias by Dr. W. S. Ford:²

¹ROBINSON—*Fundamentals of Business Organization*, page 137.

²FORD—*Some Administrative Problems of the High School Cafeteria*, page 127.

Schools Serving Less Than 200

KITCHEN EQUIPMENT	SERVICE EQUIPMENT
Cook's table	Counter
Range	Steam table
Pot sink	Ice cream packer
Soiled dish table	Pastry and dessert table
Clean dish table	Bread and sandwich table
Service refrigerator	Tray and silver rack
Vegetable sink	Cashier's stand
Bread slicer	Guide rail
Vegetable and sandwich table	Dish heater
Butter cutter	Water cooler
Pan rack	
Can opener	Recommended addition :
Recommended additions:	Cash register.
Dishwasher	
Small mixing machine.	

Schools Serving from 200 to 500

KITCHEN EQUIPMENT	SERVICE EQUIPMENT
Cook's table	Counter
Range	Steam table
Pot sink	Ice cream packer
Soiled dish table	Pastry and dessert table
Clean dish table	Bread and sandwich table
Dishwasher	Tray and silver rack
Service refrigerator	Cashier's stand
Vegetable table	Checker's stand
Sandwich table	Cash register
Vegetable sink	Dish heater
Bread slicer	Cocoa urn
Meat slicer	Water cooler
Butter cutter	Guide rail or partition
Vegetable peeler	Dish trucks
Mixing machine	Soiled dish trays.
Pan rack	
Can opener	
Recommended addition :	
Baker's table.	

Other equipment lists will be found in *The School Lunch*, by Katharine Fisher.

 XI. A reference shelf for lunchroom managers:

- Ford, W. S.....*Some Administrative Problems of the High School Cafeteria.* Bureau of Publications, Teachers College, Columbia University.
- McKenny, Ella Clark.....*Cooking Problems of the Community Group.* Whitcomb and Barrows.
- Monroe and Stratton.....*Food Buying and Our Markets.* M. Barrows and Company.
- Richards and Treat.....*Quantity Cookery.* Little, Brown & Co.
- Smedley, Emma.....*The School Lunch.* Emma Smedley, Media, Pa.
- Smedley, Emma.....*Institution Recipes.* Emma Smedley, Media, Pa.
- Smith, Frances Lowe.....*Recipes and Menus for Fifty.* Whitcomb and Barrows.
- Smith, Frances Lowe.....*More Recipes for Fifty.* Whitcomb and Barrows.
- Fisher, Katherine.....*The Lunch Hour at School.* Department of Interior Health Education, Publication No. 7.
- School Feeding Management Magazine.....*Management Magazines,* Chicago, Illinois,

Note: Large quantity recipes may be ordered from the Home Demonstration Department, Florida State College.

VI

WOMEN'S HOME DEMONSTRATION CLUB PROGRAM IN FOOD, NUTRITION AND HEALTH FOR SCHOOL CHILDREN

No. I.

"School Lunch From Home"

PREPARATION FOR MEETING:

1. Exhibit of baskets, bags, boxes in use as containers for lunch.
Show both good and bad containers.
2. Supply of school lunch bulletins.
3. Mimeograph copies of score card for lunch from home.
4. Suggest that each project leader bring a lunch to be scored.
5. Suggest that each leader bring apron, dish towel, hand towel, notebook and pencil.
6. Necessary equipment.

PLAN OF MEETING:

1. Morning Program—
Better baking for the school lunch, sandwich breads, cookies, wafers, using combination of fruits, whole cereals and nuts.
2. Afternoon Program—
Packing and scoring school lunch.

No. II.

"Hot School Lunch Supplement"

I. PRELIMINARY PREPARATION BY HOME DEMONSTRATION AGENT:

1. Discuss with the club subject matter in this bulletin on "Hot Dish Supplement."
2. Present a report of scores made of lunches brought from home.
(Teacher may be asked to co-operate in getting report.)
3. Plan for canning supplies for school lunch.

II. PROGRAM—

"Canning for the School Lunch."

1. Cans may be supplied by the Parent-Teachers' Association.
2. Vegetables may be brought by the Woman's Club.
3. Material easily used by the lunch room: Soup mixture, corn, tomatoes, beans, okra, carrots.
4. Make record of all contributors of work and vegetables. Make also a list of homes not included so that a suggested list of articles needed for hot lunch may be sent to them later.
5. Label carefully and store canned products for future use by school lunch committee.

VII

GIRLS' HOME DEMONSTRATION CLUB PROGRAM

Food, Nutrition and Health for School Children

I. PURPOSE

1. To supply a "follow-up" program for club girls who have completed "Food, Nutrition and Health" program according to Circular 978.
2. To teach practical home economics through food selection and preparation and through business management.
3. To continue to familiarize club members with food values and the relation of food to health.
4. To supply a working plan for better school lunch in small high schools and rural schools where paid supervision is impossible

II. REQUIREMENTS

A. CLUB:

1. The club must enroll to undertake the program of Food, Nutrition and Health for School Children under one of the following plans:
 - (a) 1. Improve the school lunch brought from home and the serving of this lunch.
 2. Supply a hot dish supplement.
 - (b) 1. Improve the school lunch brought from home and the serving of this lunch.
 2. Assist the cafeteria director in the lunch room program.
2. Each club is asked (a) to make four better school lunch posters for exhibit at community, county or state fairs or achievement days. (b) Keep records as suggested. (c) Send in report and story at the close of school or at the end of the hot lunch program. (d) Assist with weighing and measuring of children and with checking weight charts.

B. CLUB MEMBERS:

1. Each member of the committees shall carry or shall have completed the Food, Nutrition and Health Program (Circular 978) offered to club girls.
2. Other members of the clubs or other pupils of the school may serve in the work but shall not act as chairman nor shall they have a vote in the matters relating to the management of the school lunch.
3. Each member to complete her work must serve at least two weeks in food preparation, two in house-keeping and two in keeping records and financial accounts.
4. Each member should assist with posters to be prepared by the club.

II. PLAN OF WORK

A. HOT DISH SUPPLEMENT PLAN :

1. Present the hot lunch plan to the entire school.
2. In cooperation with the teachers, call a meeting of the mothers and get their help in supplying equipment and in conserving vegetables, soup mixtures, etc., for lunches.
3. Elect a manager—either teacher or a club girl; appoint committees; allow chairman with the teacher to be advisory committee; change chairman at short intervals.
4. Carry the hot school lunch program for a period of not less than three months.
5. Prepare and give by teams at least one demonstration in selecting or preparing a school lunch and one in packing or serving a school lunch.

B. CAFETERIA PLAN :

1. Present the purpose of the school lunch plan to the entire school.
2. In co-operation with the lunch room director, plan for service in the lunch room which will meet club requirements.
3. Prepare and give by teams at least one demonstration in selecting or preparing a school lunch and one in packing or serving a school lunch.

