Meal Planning and Preparation: Extension Circular 9-03-2

Jessie G. Greene

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Meal Planning and Preparation

prepared for 4-H cooking clubs

The University of Nebraska Agricultural College Extension Service and United States Department of Agriculture Co-operating.

W.H. Brokaw, Director, Lincoln
**My Health House**

I am building my Health House day by day,
As I eat and sleep and work and play.
My Food is the lumber that I use,
And the best materials I must choose
(Such as milk and vegetables, fruit and eggs)
While Fresh Air furnishes nails and pegs;
And Sleep, the carpenter, takes them all
To silently fashion each room and hall.
If I build aright, when I am grown
I shall have a house I am proud to own.
No need for breakdowns and repairs,
For good material wears and wears.
So I'm building my Health House day by day,
As I eat and sleep and work and play.
Some build for Happiness, some for Wealth;
But I'll find both in my House of Health.

**Rip Van Goff Howell**

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**Meal Planning and Preparation**

Jessie G. Greene

Health, happiness, and success go hand in hand. After we have learned some of the "Hows" and "Whys" of cooking in our 4-H Club, "Meal Planning and Preparation" will be all the more interesting. The total number of required recipes is smaller in the meal-planning project but we expect club girls to continue using recipes they made in the Hows and Whys for Young Cooks project.

To be eligible for this project a girl should have completed "Hows and Whys for Young Cooks." To complete the "Meal Planning and Preparation Project," Problems VI to X inclusive, each member is required to:

1. Score food habits at the beginning and close of the project.
2. Prepare or assist with the preparation of 50 meals.
3. Keep food record for one week (Problem IX).
4. Meet requirements in each problem as follows:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Requirements</th>
<th>No. of Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>VI</td>
<td>Prepare raw vegetables</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>cooked vegetables</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>cheese dishes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Read pages 6, 7 and 8</td>
<td>3</td>
</tr>
<tr>
<td>VII</td>
<td>Prepare desserts</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Plan, prepare and serve supper</td>
<td>1</td>
</tr>
<tr>
<td>VIII</td>
<td>Prepare butter cake</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>sponge cake</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>pie</td>
<td>1</td>
</tr>
<tr>
<td>IX</td>
<td>Prepare meat</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>fish</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Plan, prepare, and serve dinner</td>
<td>1</td>
</tr>
<tr>
<td>X</td>
<td>No requirement</td>
<td></td>
</tr>
</tbody>
</table>

Do my food habits score 90 or above? What does the "Food Selection Score Card" say about vegetables and fruits? In order to give ourselves the full 20 points on vegetables we must eat at least three servings each day, one of which is a yellow or green vegetable as carrots, squash, greens, or lettuce. Vegetables may be served at the family table but we cannot count them unless we eat them.

The estimated size of each serving of cooked vegetable is one-half cup, and raw vegetables should be eaten in the same proportion. To score the full 20 points on fruits, we must eat at least two servings daily, which include either a raw fruit or vegetable or canned tomato. Vegetables and fruits are both said to be good health insurance. Review the "Classes of Foods" and their uses in the body. If possible look up the food value of vegetables in some good textbook.
Problem VI—Vegetables—Scalloped Dishes—Cheese

Why do we eat vegetables? There are several reasons. Vegetables are laxative, chiefly because of the cellulose or woody fiber which they contain. They are good sources of the minerals most often lacking in our diet. Beans, peas, and greens supply iron and calcium. Vegetables are important sources of vitamins. Vitamin A is abundant in yellow and green vegetables. Vitamin B appears in nearly all vegetables. The best sources for vitamin C are raw cabbage, tomatoes, and green peppers. This vitamin is destroyed by continued cooking. However, cooked tomatoes are a good source of vitamin C because the acid they contain preserves this vitamin. Green vegetables are a good source of vitamin G. Vegetables are not considered high in energy value; however, potatoes, dried beans, and peas are exceptions.

Some people eat a very limited variety of vegetables and this is often true because they did not learn to like them in childhood. We do not play a game well without practice. Learning to like different vegetables is a game which needs practice from childhood to old age. After studying their food value we will know why we need three servings daily, including either a yellow or a green one. How can we teach younger children to enjoy vegetables? Do you think it helps if older brothers and sisters always eat the vegetables that are served? The following rules should help older people as well as boys and girls to learn to eat vegetables.

**FOOD-SELECTION SCORE CARD**

<table>
<thead>
<tr>
<th>How to Score</th>
<th>Perfect Score</th>
<th>1st Score</th>
<th>2nd Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 full cups, 10; 3 full cups, 15; 4 full cups, 20</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEGETABLES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 serving, 5; 2 servings, 10; 3 servings, 15. Potatoes may be included as one of the above servings. If a yellow or green vegetable is included, such as carrots, squash, greens, or lettuce, 5</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRUITS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 serving, 10; 2 servings, 15. If raw fruit or vegetable or canned tomato is included, 5</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WHOLE GRAIN PRODUCTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 serving, 10; 2 servings, 15</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEESE, EGGS, MEATS, DRIED BEANS OR PEAS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 serving of any one of above, 10</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 serving of any two of above, 15</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WATER (total liquid)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 cups, 5; 6 cups, 10</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEDUCTIONS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of tea or coffee, 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eating sweets between meals, 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL SCORE</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

contain preserves this vitamin. Green vegetables are a good source of vitamin G. Vegetables are not considered high in energy value; however, potatoes, dried beans, and peas are exceptions.

Some people eat a very limited variety of vegetables and this is often true because they did not learn to like them in childhood. We do not play a game well without practice. Learning to like different vegetables is a game which needs practice from childhood to old age. After studying their food value we will know why we need three servings daily, including either a yellow or a green one. How can we teach younger children to enjoy vegetables? Do you think it helps if older brothers and sisters always eat the vegetables that are served? The following rules should help older people as well as boys and girls to learn to eat vegetables.

First—Eat small amounts, until accustomed to the flavor. Young children should have strained vegetables and a good way to serve them is in cream soups. Add just enough of the vegetable to flavor the soup when it is first given; then gradually increase the amount as the child becomes accustomed to the flavor. Mash small amounts of a vegetable such as carrots or peas with potatoes until the child learns to like the new flavor.

Second—Combine vegetables with foods which you like. Most people like the flavor of meat, and vegetables may be combined with meat in a variety of ways. Sometimes people can learn to eat vegetables in a salad when they do not like them served alone.

Third—Serve vegetables attractively. Have you not been tempted to eat a salad that contained some vegetable which you do not ordinarily like, because it looked pretty?

Fourth—Cook vegetables to retain their color, food value, and good flavor. This will be discussed under cooking of vegetables.

**VARIETY IN USE OF VEGETABLES**

The old saying, “Variety is the spice of life,” applies to the use of vegetables as well as to other foods. There are enough different vegetables grown in Nebraska so that people may have a great variety during the year.

Name some spring, summer, and fall vegetables.

What vegetables may be stored for winter use?

Variety in preparation is just as important as variety in kind. We eat potatoes daily without growing tired of them. Is it not because we have learned to prepare them in so many different ways? Have you ever served spinach and eggs, spinach and bacon, cream of spinach soup, or spinach salad? If you are tired of stewed tomatoes, try cream of tomato soup, clear tomato soup, Spanish rice, fresh tomato salad, jellied tomato salad, and the many dishes in which tomato sauce is used instead of white sauce such as macaroni, scalloped hominy and cheese, baked onions, fish, etc. Club members should learn to prepare vegetables in various ways so that each member of the family will enjoy eating them.

A “variety contest” will add interest to the club meeting when this problem is discussed. Each member may bring to the meeting a list of different ways of serving a certain vegetable and then have a judging contest to decide which is the best list.

**BUYING AND CARING FOR VEGETABLES**

All of us have the problem of caring for the vegetables from our gardens and perhaps most of us buy some vegetables, so these suggestions should therefore be helpful.

Vegetables that are in season are superior in quality and are more economical than those out of season. Select young, fresh vegetables for the sake of their flavor and vitamin C content. Freshness in many vegetables is judged by the leaves. Fresh vegetables are crisp. Young vegetables are tender.
Specks or spots on vegetables indicate inferiority. Soundness in lettuce, cabbage, and cauliflower can be judged by their appearance, firmness, and weight.

Avoid over-ripe tomatoes. If tomatoes are to be bought in quantity it is well to buy them under-ripe, except those needed for immediate use. Green tomatoes are often picked in the fall to avoid frost. These may be wrapped in paper to prevent shriveling, and kept in a dark, cool place. Inspect often because they ripen almost as fast as the unwrapped ones.

Storing of late vegetables is an economy for those who grow them in sufficient quantity for the needs of the family. A variety of vegetables including potatoes, onions, squash, cabbage, and late root vegetables may be stored successfully. Potatoes may be kept in the storage room in the basement, in outdoor storage cellars, and in banks or pits. When such a place is provided it is a good plan to have a small quantity in the basement for immediate use. A cool, dry, well ventilated place protected from freezing is essential. Detailed directions for storage are given in Farmers' Bulletin No. 879, entitled, "Home Storage of Vegetables."

Dried vegetables are easily kept in tin cans or glass jars. We learned something about the sizes, weights, and grades of canned products in "Hows and Whys for Young Cooks," page 12. There are many brands in each grade so we should ask the grocer to tell us about the ones which he carries. Do you think it is economy to buy the fancy grade? It will be interesting for club members to compare a can from each grade and judge whether the difference in quality is worth the difference in price.

Fresh vegetables should be washed before they are used. A brush is helpful. It is easy to freshen wilted vegetables by placing them in cold water for a short time, but if they stand long in water they lose flavor. After radishes, celery, lettuce, and cucumbers have been washed they should be wrapped in damp cheese cloth and put in the refrigerator. Be careful which vegetables you place in the refrigerator, because some have odors that are readily absorbed by milk and butter. A well ventilated cooling closet such as a screened box in the kitchen or pantry window may be convenient for keeping vegetables.

PRESERVING COLOR, FLAVOR, AND NUTRIENTS

Raw vegetables with their bright colors are attractive. Those eaten raw are still attractive when they reach the table, but the cooked ones often lose their original beauty.

Cabbage, a vegetable especially rich in vitamins and one that is cheap and available a large part of the year, is frequently ruined in cooking. When raw it is a creamy white with a tinge of green. It has a pleasing appearance and a slightly biting flavor which most people like. When cooked it may be as delicate and pleasing as when raw; instead it is often changed completely and has a very strong taste, a disagreeable odor, and a most unappetizing brown color. In this problem we will learn some of the secrets of preserving color, flavor, and nutrients in cooking vegetables. In some cases we must sacrifice one or another, but not all three, as is so frequently done.
such a large percentage of nutrients the water should be utilized. When served with the vegetable the juice is often not eaten, so as a rule it is best to use it in soups, gravies, or scalloped dishes.

CONCLUSIONS CONCERNING COOKING OF VEGETABLES

From the standpoint of conserving food value, baking is the best method of cooking vegetables, steaming next, and boiling next.

Baking.—Baking in a covered dish without adding water, or cooking in a covered pan on top of the stove with little or no water applies the same principle as baking in the skin.

Steaming.—Steaming is recommended for vegetables which can be steamed without damaging either color or flavor. Such vegetables include carrots, sweet and Irish potatoes, squash, wax beans, parsnips, and beets.

Boiling.—Boiling is the best method for vegetables of the cabbage family (which includes Brussels sprouts, cauliflower, and turnips), for onions, and for most green vegetables. Boil in water to cover for the shortest possible time. Use boiling water. Leave the cover on until the vegetable is tender. There should be more water than is required to cook the vegetables unless, like spinach, they can be cooked in a very short time.

It is considered best to shred cabbage, separate cauliflower, and cut certain vegetables in order to shorten the cooking period and prevent the development of a bad taste and odor. Less food value is lost if carrots, parsnips, and sweet potatoes are cut lengthwise rather than crosswise.

Use the cooking water, because boiling removes such a large percentage of nutrients. If the time of cooking is short and the amount of water used is not too great, the cooking water or juice from the cooked vegetable should have as good a flavor as the vegetable itself. It may be used in any meat, egg, or vegetable dish where water or milk is used.

Vitamins B and C are destroyed rapidly in the presence of alkali; therefore one should not put soda in the cooking water except perhaps where dried beans are cooked in very hard water.

Cook vegetables only until tender but still firm in texture. Regardless of method used, all vegetables are ruined by long boiling or by keeping them hot for a long time after cooking.

PREPARATION OF VEGETABLES

Wash and rinse all vegetables thoroughly. Scrub with a brush if necessary.

String beans.—Cook whole or in two-inch pieces or cut lengthwise after the ends and strings have been removed.

Lima beans and peas.—Wash and then shell for cooking.

Beets.—Wash and then boil or bake in their skins, with two inches of top and the root left on to prevent loss of color or “bleeding.” When cooked tender dip in cold water and slip off the skin.

Cabbage.—Trim as needed, carefully removing the outer leaves. Inspect for insects and wash thoroughly. If wilted let it stand in very cold water until crisp. If a mechanical refrigerator is used, place it in a tight pan to freshen. Shred, slice, or cut in wedge-shaped pieces.

Cauliflower.—Remove leaves, wash, and break into flowerets before cooking. The tender leaves may be cut in small pieces crosswise and cooked until tender.

Carrots.—Scrub and cook whole or in slices. Scrape old carrots to remove the tough skin.

Celery.—Scrub under running water with a vegetable brush.

TIME-TABLE FOR BOILING VEGETABLES

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>How Prepared</th>
<th>Time to Cook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asparagus</td>
<td>Woody ends cut off</td>
<td>Tips 2-10</td>
</tr>
<tr>
<td>Beans, green</td>
<td>Whole</td>
<td>30-35</td>
</tr>
<tr>
<td>Beets, young</td>
<td>Whole</td>
<td>40-60</td>
</tr>
<tr>
<td>Brussels sprouts</td>
<td>Partially split or whole</td>
<td>9-10</td>
</tr>
<tr>
<td>Broccoli</td>
<td>Woody ends cut off, stalks cut into 1-inch sections</td>
<td>stalks, 30</td>
</tr>
<tr>
<td>Cabbage, green</td>
<td>Shredded</td>
<td>flowerets</td>
</tr>
<tr>
<td>Cabbage, white</td>
<td>Shredded</td>
<td>6-8</td>
</tr>
<tr>
<td>Cabbage, red</td>
<td>Shredded, cooked with 2 tarts or 4 T. vinegar</td>
<td>8-9</td>
</tr>
<tr>
<td>Carrots</td>
<td>Cut in halves or thirds lengthwise</td>
<td>20-25</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>Separated into flowerets</td>
<td>8-10</td>
</tr>
<tr>
<td>Onions, white</td>
<td>Partially quartered</td>
<td>25-35</td>
</tr>
<tr>
<td>Onions, yellow</td>
<td>Partially quartered</td>
<td>25-30</td>
</tr>
<tr>
<td>Parsnips</td>
<td>Cut crosswise in 2 pieces and lengthwise in halves or thirds</td>
<td>25-30</td>
</tr>
<tr>
<td>Peas</td>
<td>Shelled</td>
<td>20-30</td>
</tr>
<tr>
<td>Potatoes, Irish</td>
<td>Cut in halves lengthwise</td>
<td>25-30</td>
</tr>
<tr>
<td>Potatoes, sweet</td>
<td>Cut crosswise then lengthwise in halves</td>
<td>15-25</td>
</tr>
<tr>
<td>Rutabagas</td>
<td>Cut lengthwise in ½-inch slices</td>
<td>25-30</td>
</tr>
<tr>
<td>Spinach</td>
<td>Stems removed</td>
<td>4-6</td>
</tr>
<tr>
<td>Squash (Hubbard)</td>
<td>Pared and cut into pieces 2 by 3 inches</td>
<td>8-10</td>
</tr>
<tr>
<td>Turnips, white</td>
<td>Pared and cut in ¾-inch cubes</td>
<td>20-25</td>
</tr>
</tbody>
</table>

Eggplant.—Wash and leave whole for baking. Pare and cut in one-fourth-inch slices for frying.

Corn.—Remove the husk and silk. Remove the silk with the point of a sharp knife or tweezers.

Greens.—Wash by dipping up and down in three or four fresh waters. Always lift greens out of water instead of pouring water off.

Lettuce.—To wash head lettuce, cut off stem end and cut stem out of head about three-fourths to one inch deep. Let water run into the hole, invert, and drain. Repeat four or five times.

Parsnips.—Wash, scrape or pare, cut in halves or quarters lengthwise.

Turnips.—Wash, pare, and slice or dice.
Peppers.—Cut open around the stem or in halves and remove the seeds.

Potatoes.—Scrub the skin thoroughly if they are to be baked or boiled in the skin. Wash and pare as thinly as possible if they are cooked without the skin.

Tomatoes.—To peel for stewing, first dip them in boiling water and then in cold water or rub all over with the back of a knife. Tomatoes are not peeled for baking, broiling, or frying.

The amount of vegetables used for cooking when the above timetable was made was four servings or approximately two cups when cooked. The time varies somewhat with the amount of vegetable, the amount of water, the size and shape of the cooking pan, the kind of heat, and other conditions. However, this table will serve as a guide and it should remind us of the fact that we often overcook vegetables. It is interesting to divide these vegetables into two groups, the 5-to-10-minute group and the 15-to-30-minute group.

Boil strong-flavored vegetables such as onions uncovered in a large amount of boiling water. Boil other vegetables covered in just enough water to cook them tender without boiling dry. Use about 1 teaspoon of salt per quart of water. Do you know when water is boiling? There is a difference between hot water and boiling water. When water boils the bubbles break over the top and it seems to jump. Water boils at about 212° F. and no matter how much heat is added the temperature stays the same. Some people waste fuel because they think the harder water boils, the hotter it will be, which is not true. Regulate the heat so that the water is just boiling, because rapid boiling causes the vegetable to slough off or lose shape.

VARIATIONS OF BOILED VEGETABLES

Buttered or mashed.—Use about 2 T. butter and 1/4 t. salt for each 2 cups of vegetable. This is the amount given for mashed vegetables. For others usually 1 T. of butter for each individual half-cup serving or 1/2 T. for 2 cups is sufficient. A small amount of hot whole milk or cream is also added to mashed potatoes and winter squash. Avoid adding enough liquid to make the vegetable heavy.

Vegetable puffs.—Mix one or two beaten egg whites with the mashed vegetable and bake 15 or 20 minutes in a moderate oven. Heat left-over mashed vegetables in the top of the double boiler and remash to prevent lumpiness. Grated cheese may be sprinkled over a potato puff before it is baked.

Cooked in milk.—Almost any vegetable may be finely ground in a food chopper and cooked from 5 to 8 minutes in milk enough to cover. Season and serve with the milk as a dressing.

Creamed.—Cut boiled or steamed vegetables in small pieces and combine with white sauce. Diced vegetables are often more attractive than sliced. The medium white sauce given in "Hows and Why," page 19, is used for creamed vegetables. The amount varies from 1/2 to 1 cup of white sauce to 2 cups of the vegetable.

Scalloped.—Prepare as for creamed vegetables. Place alternate layers of the diced vegetable and white sauce in a buttered baking dish and cover the top with buttered crumbs. Bake in a moderate oven until the crumbs are brown.

Stuffed.—Vegetables, except tomatoes, are usually boiled, steamed, or baked until tender before stuffing. Scoop out the center of the vegetable, season the pulp and refill. Various things may be added to the seasoned pulp such as bread crumbs, cooked rice, or ground meat. Crisp bacon or cooked ham is especially tasty in stuffed tomatoes or stuffed peppers. Cover top with buttered crumbs and brown in oven. Eggplant, onions, green peppers, small summer squash, turnips, and tomatoes are good vegetables for stuffing.

Glazed.—Boil vegetables whole, about half the length of time required to make them tender, then slice and either cook in sirup over a low flame until tender or place in a buttered pan, cover with sugar or a heavy sirup, and cook in the oven until tender and lightly browned. Use a sirup made of about 2 parts sugar to 1 part water. The cooking water may be used for making the sirup. Brown sugar is often used with sweet potatoes. When glazed in the oven, vegetables require less watching.

STEAMED VEGETABLES

Steamed vegetables are similar to boiled ones. Steaming requires longer than boiling but the vegetables retain more mineral nutrients and vitamin B when steamed than when boiled. It is advisable to cut all vegetables except beets into pieces suitable for serving before steaming. Place on a rack above boiling water in a tightly covered kettle and steam until tender. Potato balls and other vegetables that are to be kept in shape are best steamed.

CREAM SOUPS AND SALADS

Many left-over as well as freshly cooked vegetables may be used in cream soups. (See cream soups in "Hows and Why," page 19.) It should not be difficult to provide a raw fruit or vegetable each day because most fruits are eaten raw, and many vegetables are appetizing when served raw. Have you tried strips of raw carrot or turnip as a relish? These vegetables are washed, scraped, or pared, and cut in lengthwise strips, about 1/4-inch square and three inches long. They make a pleasing variety and may be arranged on a relish dish with pickles and celery. Children often eat too many pickles; fresh crisp vegetable strips may help to solve this problem.

Salads offer many tempting ways to serve both cooked and raw vegetables. A few suggestions are given in Problem V but each club member should be on the lookout for others and good recipes may be exchanged at the club meeting. Keep your recipe file growing.

You may wish to try the following sour-cream dressing with fresh vegetables such as lettuce, cabbage, onions, cucumbers, endive, and spinach.

UNCOOKED SOUR-CREAM DRESSING

<table>
<thead>
<tr>
<th>1 c. sour cream</th>
<th>1/4 t. mustard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 T. sugar</td>
<td>1/4 t. paprika</td>
</tr>
</tbody>
</table>
| 1 T. vinegar or lemon juice | Mix dry ingredients, add to cream. Beat until frothy; add the acid carefully.

GETTING READY TO COOK

By this time 4-H Cooking Club members should have formed the habit of personal cleanliness. Do you always remember to have your hair combed, and held back with a band or cap, your dress brushed, hands and finger nails clean, and wear a clean apron, when you are preparing food? A noted psychologist says that we should never allow an exception to occur until a habit is formed. So if we are careless and neglect to do these things now, the careless habit is likely to be the one which will follow us through life.
Since it is difficult to wash and prepare vegetables without soiling the floor and table, some families have a place in the laundry or out of doors where such work may be done. A denim butcher's apron is suitable for this rough work and saves our better aprons.

The preparation of vegetables requires so much time it is often a good plan to do it ahead of time. For example, some dinner vegetables may be prepared after breakfast or lunch. This is an opportunity for club members to help Mother a great deal.

**BAKED POTATOES**

Select medium-sized potatoes with smooth skin. Wash and wipe dry. Rub lightly with fat if a soft shell is desired. Bake in a hot oven until tender. The time required depends upon the size. Those of medium size usually require 45 to 60 minutes. The baking may be hastened by first boiling them 15 to 20 minutes.

As soon as they are removed from the oven slit them in the middle, then burst the skin open by squeezing with the hands. One teaspoonful of butter and a dash of paprika may be put into the opening. Potatoes are more mealy if split open immediately to allow the escape of steam.

**BAKED STUFFED POTATOES**

Cut baked potatoes lengthwise and scoop out most of the inside, being careful not to tear the skin. Mash, season, and beat well with a fork. Return to the skin and bake in oven until delicately browned.

**TOMATO TOAST**

Make tomato sauce in a sauce pan using 2 T. butter, 2 T. flour, 2 c. stewed tomatoes, and ½ t. salt. Pour over lightly buttered toast. Serve at once. This is enough for 6 or 8 slices of toast.

**SCALLOPED DISHES**

Left-over vegetables, meat, chicken, or fish may be made into economical and appetizing scalloped dishes. Prepare as for creamed vegetables. Place alternate layers of the diced vegetable and white sauce, usually about one-third as much white sauce as vegetable, in a buttered baking dish and cover the top with buttered crumbs. Bake in a moderate oven until the crumbs are brown.

Left-over bread may be used, either fresh or dry. Dry the scraps of bread in a slow oven and either crush them with a rolling pin or grind in the meat grinder. Store in a paper bag and they are ready for use. Dry crumbs are often used to thicken gravies and soups and may be substituted for part of the flour in quick breads. To butter crumbs, use 2 T. of butter for each cup of dry crumbs and ½ t. salt. Melt butter, add the crumbs, then stir and mash them until they have absorbed the fat.

The following are often used instead of white sauce: tomatoes as in scalloped eggplant; bread crumbs as in scalloped tomatoes; and rice or mashed potatoes moistened with milk, their own liquid, or meat broth.

For creamed _au gratin_ or scalloped _au gratin_ dishes add ¼ to ½ c. grated cheese to 2 cups of the vegetable. This is 1 T. to 2 T. for each half-cup serving. When grated cheese is placed on top of the scalloped vegetable, bake only long enough to melt the cheese because high heat toughens cheese. As a rule it is better to cover the top layer of cheese with buttered crumbs. The flavor of cheese blends well with potatoes, cabbage, carrots, cauliflower, spinach, tomatoes, and turnips. It will be interesting to add to this list as you prepare different _au gratin_ dishes.

**CARROTS _AU GRATIN_**

To one cup of medium white sauce add ½ c. shaved or grated cheese and stir until cheese is melted. Mix with 2 c. cooked diced carrots. Place in a buttered baking dish. Cover with buttered crumbs and brown in oven.

**SCALLOPED GREENS**

Spinach, beet greens, Swiss chard, or any other such vegetable may be used. Fry several slices of bacon or salt pork until crisp, cut in small pieces. For each cup of greens add about 1 T. of vinegar to the meat drippings. Add a little salt if needed. If greens are cooked in salted water and salt pork is used, extra salt may not be needed.

Place a layer of cooked greens in a buttered dish, add a layer of meat, and pour over it the seasoned drippings. A small amount of cooking water from the greens may be added if more moisture is needed. Repeat the layers, cover with buttered crumbs and brown in oven.

**SCALLOPED EGGPLANT**

2 c. diced eggplant
1 c. buttered dry bread crumbs
1/2 t. salt

Fry and dice eggplant. Place the bacon in a frying pan and brown lightly, stirring often so it cooks evenly. Stir into this the onions and cook a few minutes. In a buttered baking dish place a layer of tomato, eggplant, bacon and onion. Sprinkle with salt. Repeat the layers, using the remainder of these ingredients and place the crumbs on top. Bacon fat may be used for the crumbs instead of butter. Bake in a slow oven about 1 hour or until the eggplant is tender. If the tomato is thin, thicken with about 1 T. of flour or about ¼ c. bread crumbs. The amount given is for dry bread crumbs. If soft crumbs are used, about twice the amount is required.

**CHEESE**

The composition of cheese is as follows:

<table>
<thead>
<tr>
<th></th>
<th>Water</th>
<th>Fat</th>
<th>Protein</th>
<th>Carbohydrates</th>
<th>Minerals</th>
<th>Vitamins</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>34.2%</td>
<td>33.7%</td>
<td>25.9%</td>
<td>2.4%</td>
<td>3.8%</td>
<td>A + G</td>
</tr>
</tbody>
</table>

Cheese is made from the curd of milk, but because so much of the water is removed, the percentage of other food nutrients is much higher than in milk. Cheese contains so much protein that it may be substituted for meat. It is high in calcium and phosphorus and contains some iron.

Cheese is often considered hard to digest because it is such a concentrated food. To overcome this, grate it or cut it into small pieces and combine with other food. Eat slowly and masticate thoroughly. It is important to know that cheese is easily overheated either by long cooking or high temperatures. This is the reason we protect cheese from oven heat with bread crumbs. Overcooked cheese is lumpy, stringy, and tough.

**COTTAGE CHEESE**

Allow milk to sour until a firm clabber is formed. Heat in a double boiler gradually to 100° F. for 15 minutes or until the whey separates from the curd. Try this simple test: press between the fingers and if some of the curd remains between the fingers it is heated enough. Stir at frequent intervals during this time. Remember...
that high heat, or moderate heat for a long time, toughens the curd and makes it hard to digest. Pour the curd and whey into a cheese-cloth bag and drain. Empty the curd and work with a spoon until it is fine in grain. Season with a little salt and pepper. Moisten with cream.

CHEESE TOAST

Toast slices of bread. Butter them, then sprinkle grated cheese over them. Make a medium white sauce and pour it over the toast. See "Hows and Why's For Young Cooks," Problem II.

TOMATO CHEESE RAREBIT

2 T. butter 1 c. grated cheese
2 T. flour salt, mustard, cayenne
½ t. soda 2 eggs
½ c. thin cream or milk ¼ c. stewed and strained tomatoes

Melt butter, add flour. Add cream and cook until thickened. Add soda to tomatoes. Combine with cream sauce. Add beaten egg and seasonings. Add cheese. When cheese is melted, serve on toast or crackers.

MACARONI AND CHEESE

2 c. cooked macaroni ½ t. salt
1/4 c. finely chopped cheese ½ c. milk
1/4 t. pepper 1 c. buttered crumbs

Boil macaroni in a large amount of water as you did rice in "Hows and Why's For Young Cooks" problem III. Macaroni swells when cooking. Measure it before and after cooking so that you will know how much dry macaroni it takes to make 2 c. when cooked.

Arrange macaroni in layers in a buttered baking dish. Sprinkle each layer with salt, pepper, and cheese. Add the milk and cover with buttered crumbs. Bake 20 to 25 minutes in a moderate oven.

One cup medium white sauce may be substituted for the milk and seasonings. Stir the chopped cheese into white sauce and pour over macaroni in a buttered dish. Cover with crumbs and bake as directed.

Variation.—Cooked spaghetti, noodles, rice, or sliced or diced potatoes may be used in place of macaroni.

CHEESE SOUFFLE

3 T. butter ½ t. salt
4 T. flour 1 egg
1 c. milk ¼ c. grated cheese

Make a white sauce. Remove from fire and add cheese. Stir until smooth and set aside to cool. Separate the egg, beat the white until stiff. Beat the yolk and add the white sauce to it. Stir until combined, then fold in the beaten egg white. Turn into a buttered baking dish. Set in a pan of hot water and bake in a moderate oven 30 to 40 minutes.

Problem VII—Desserts—Supper—Mother's Vacation

THE MOST desirable desserts for general use are those which are easily digested, such as fruit and milk desserts. Simple desserts are to be preferred to rich combinations. Richness is due to both fat and sugar. When a rich dessert is served to adults it is well to plan a simpler one for children.

When planning a dessert, consider the other foods served in the meal and those served in the other meals of the day. For example, if the main course is heavy, a light dessert is appropriate.

Let us review some of the things we have learned about custards and other milk desserts. Puddings containing eggs should be cooked at a low temperature. We prepare a soft custard in the double boiler in order to keep the temperature below boiling. When baking custard, we place the baking dish in a pan of water to lower and even the temperature. In both cases we are careful not to overcook the custard because this causes it to separate or curdle. If you are privileged to take Home Economics in College you will study many rules or principles of cooking. One principle of cooking eggs may be stated as follows: Heat coagulates egg albumen at a temperature of 160° F.-180° F. Higher temperatures toughen egg albumen. When we realize that boiling temperature is 212° F., we understand why egg dishes are easily overcooked. Have you noticed what happens when a little egg yolk or other fat gets into the egg white you are beating? This suggests another principle: Egg yolks or other fats destroy the air-holding capacity of egg white.

Children sometimes want to eat their dessert first. If allowed to do so, they often do not eat other foods which they need for complete nourishment because the dessert satisfies their appetite. A sweet food, especially one containing much sugar, irritates an empty stomach. Sweet foods eaten at the close of a meal mix with food already in the stomach and do not have this effect.

In this problem we will consider only simple desserts, reserving cakes and pastry for another problem. Recipes given in "Hows and Why's For Young Cooks" will not be repeated.

BAKED PEARS OR APPLES

6 pears 2 T. butter
1 4 c. brown sugar ½ t. cinnamon
1 c. milk

Wash the pears, cut in halves lengthwise. Remove core. Place halves in baking pan. Cover with brown sugar and cinnamon mixed together. Place a portion of the butter on each half pear. Cover bottom of pan with water and bake in a moderate oven until fruit is tender. Serve hot or cold.

Variation.—Omit the cinnamon. Serve with cream. Place a stoned date on each half fruit. Peaches may be peeled and baked whole or cut in halves.
BROWN BETTY

3 c. sliced apples
1/4 c. water
1/2 t. cinnamon
1/4 c. sugar
1/4 c. melted butter

Arrange alternate layers of buttered bread crumbs and thinly sliced apples in a baking dish. Sprinkle with a mixture of sugar and cinnamon. Finish with crumbs. Bake for one-half hour or until the apples are tender and the top crumbs brown. Brown sugar or molasses may be substituted for white sugar.

Variations.—Stewed peaches, apricots, or rhubarb (omitting cinnamon) may be substituted for the apples. A small amount of nutmeg may be added or substituted for part of the cinnamon.

FRUIT SOUFFLE

1 c. fruit pulp
Sugar if needed
Few grains of salt
2 egg whites

Use any kind of fruit either fresh or preserved. When canned fruit is used, drain off the syrup. Rub the fruit pulp through a sieve, add a few grains of salt, sweeten if necessary and heat. Fold the stiffly beaten egg whites into the hot fruit pulp. Fill a greased baking dish or small molds three-fourths full, set in a pan of hot water and bake until firm in a slow oven (about 15 min.). Serve with whipped cream or a soft custard.

GENERAL RULES FOR GELATIN

The directions below apply to plain granulated gelatin. It is sold in packages, some of which have a package of acid inclosed. Many commercial gelatins contain sugar, acid, color, and flavoring so that only water is added in preparing the plain dessert. When a commercial gelatin dessert is used follow the directions on the package.

Soak granulated gelatin in cold water or milk 5 to 10 minutes. Dissolve in hot liquid or over hot water. Add sugar and stir until dissolved. Add fruit juice, strain if a clear jelly is desired, and cool.

Rinse mold with cold water. Do not dry. Pour in mixture. Place in a cool place or refrigerator and leave until ready to serve. If a foamy gelatin is desired, allow mixture to partially stiffen, then beat thoroughly.

When egg whites or whipped cream are to be added, allow gelatin mixture to partially stiffen, beat until foamy, then let stand until cool enough that when a spoonful is dipped out the space is left. Fold in the beaten whites or whipped cream. Chill.

One T. granulated gelatin will stiffen 1 pt. of liquid.

If pineapple is added to gelatin it must be cooked or canned because fresh pineapple thins the gelatin.

SNOW PUDDING

1 T. granulated gelatin
1/4 c. cold water (to soak gelatin)
1/4 c. boiling water
1/4 c. cold water

Follow the general rules for gelatin and when the mixture begins to stiffen beat until foamy. Fold in the beaten egg whites and mold. Serve with a custard sauce which may be made with the egg yolks. Use two egg yolks in place of one whole egg in the custard recipe in Problem II of "Hows and Whys for Young Cooks."

MEAL PLANNING AND PREPARATION

VARIATION.—Fold whipped cream (1 c. of cream measured before it is whipped) into the beaten gelatin instead of egg white. This is called Bavarian Cream.

FRUIT WHIP

1 egg white
1/2 c. prune or apricot pulp
1/2 t. lemon juice
1/2 t. salt

Cook fruit pulp with sugar to sweeten until consistency of marmalade. Add salt and lemon juice. Cut and fold in stiffly beaten egg white and bake in a slow oven, or pile lightly in stemmed sherbet glass and serve cold with soft custard or whipped cream.

For unsweetened fruit pulp use about 1/2 as much sugar as pulp. If a sweetened fruit pulp is used the amount of sugar to be added depends upon the amount in the fruit pulp.

PRUNE SHORT CAKE WITH PRUNE SAUCE

2 c. flour
1/2 c. fat
2 c. sugar
1 c. boiling water
1/2 t. baking powder
1/2 c. milk (scant)
1/2 t. salt
1 T. sugar

This is a variation of the baking powder biscuit recipe. Refer to Problem III for the method of making. Review directions for cooking dried fruit in "Hows and Whys." When short cake is baked, decorate top with prunes which have been carefully cooked and seeded. Serve with plain or whipped cream or prune sauce.

PRUNE SAUCE

1 c. prune juice
1 T. butter
1/2 T. flour or 1 T. cornstarch
1/2 T. sugar (with unsweetened juice)
1 T. lemon juice

Mix flour and sugar together to prevent lumping. Add prune juice and cook 3 minutes or until it becomes clear rather than milky. Add butter and lemon juice.

FRUIT COBBLER

Place stewed peaches or other fruit in an enamel baking dish. Only a small amount of juice is needed and it may be slightly thickened.

Prepare a short cake dough. Roll 1/2 inch thick and place on top of fruit. Bake in a hot oven. Serve with the fruit juice, a fruit sauce, or cream.

COTTAGE PUDDING

2 c. flour
2 c. sugar
1 c. boiling water
2 c. milk

Mix as for muffins or cake. Bake in a moderate oven about 25 minutes. Serve with a sauce or with fruit and cream.

VARIATION.—Fill the bottom of the pan with mashed, drained fruit pulp. Pour the cottage pudding mixture on top and bake.

VANILLA SAUCE

1 c. boiling water
1/2 T. flour or 1 T. cornstarch
1/2 c. sugar
1/2 c. milk
1 t. vanilla
1 t. butter

Mix flour and sugar. Add water gradually, stirring constantly. Cook a few minutes or until it becomes clear. Remove from fire. Add butter and vanilla and mix thoroughly.
PLAIN JUNKET

1 junket tablet
1 pt. fresh milk
3 T. sugar
1/2 t. vanilla

Place junket tablet and cold water in a cup. Crush with a spoon and dissolve thoroughly. Add sugar and vanilla to milk, warm slowly until lukewarm (110° F), not hot, stirring constantly. Remove from stove. Add the dissolved junket to the lukewarm milk and stir for a few seconds. Pour into dessert dishes and let stand in a warm place undisturbed until firm, about 20 minutes. Then, without jarring, remove to a cold place. Serve in the same dishes.

Variations.—To make this dessert more attractive, the last thing before serving, add whipped cream, or a chocolate sauce, or a sprinkling of chopped nuts. Prepared junket may be purchased in several different flavors. This contains sugar and flavoring so it is necessary to add only milk.

FROZEN DESSERTS

Simple frozen dishes are a wholesome addition to the family diet because of the fruit and milk they contain. They should be eaten slowly and in moderate amounts.

A frozen mixture is made up of tiny ice crystals. It is smooth when these crystals are very small and coarse when they are large. We secure small crystals by turning the crank rapidly while freezing or by using an ingredient which thickens the mixture. Some ingredients used to thicken frozen desserts are gelatin, junket, and eggs. Cream has the same effect.

Be careful about disposing of the salty mixture used for freezing and packing ice cream. If thrown on the lawn it destroys the grass, leaving an unsightly spot.

Directions for freezing and packing.—Crush ice by placing it in a sack and pounding it with a mallet or broad side of an ax. Use eight parts of ice to one part of rock salt for most mixtures. Mix only enough for immediate use because salt hastens the melting of ice.

Prepare freezer container by scalding and cooling. Pour in mixture to be frozen, never filling the can more than three-fourths full, as liquids expand in freezing. Put can in place, adjust cover and handle to see if it turns freely.

Add the ice and salt mixture until it comes above the level of the liquid to be frozen. See that the upper drain for salt water is open. Turn crank slowly and evenly, adding ice as needed.

When mixture is frozen, draw off the salt water; clean the ice and salt from top of can; uncover; remove and scrape dasher, stir cream down into can; place paraffin paper over ice cream and replace the cover. Cover with papers or a heavy cloth. Let stand at least an hour.

Preparation of mixture to be frozen.—Make a sirup of sugar and part of the water in the recipe, cook, and add the remaining liquid. If no water is used, the sugar may be dissolved in part of the milk, or in fruit juice. Warming helps dissolve the sugar and gives a smoother texture.

When egg white or whipped cream is to be added to a frozen mixture, freeze the other ingredients to a mush, then add egg whites stiffly beaten or whipped cream, and finish freezing.

When gelatin is used, follow general rules for gelatin mixtures, using whatever liquid the recipe calls for.

When milk or cream is to be added to a mixture containing an acid, two methods are suggested to prevent curdling: (1) Sweeten the cream or milk and freeze to a mush. Add fruit juice or crushed fruit and finish freezing. (2) Add sugar to fruit (and water if called for), freeze to a mush. Add milk or cream and finish freezing.

One quart of frozen mixture makes from six to eight servings. About three cups of liquid will make one quart of frozen mixture.

FRUIT ICE

Make a sirup of the sugar and water and allow it to cool. Extract the lemon and orange juice. Crush the peeled and scraped banana with a wooden potato masher. Mix the fruits and salt with the sirup and freeze at once.

VANILLA ICE CREAM

Mix ingredients and freeze.

CUSTARD VARIATION

Make a soft custard of the milk, sugar, and egg yolks. When the custard is cold, add cream, either plain or whipped.

BUTTERMILK SHERBET

Mix buttermilk, sugar, crushed fruit, vanilla, and salt. Mix buttermilk, sugar, crushed fruit, vanilla, and salt. Freeze partially. Whip cream and add to frozen mixture. Freeze until firm.

THE CLUB MEMBER'S SUPPER

Supper plans depend largely on breakfast and dinner plans. Sometimes the hearty meal is served at noon and sometimes in the evening. It is better for growing children to have their heaviest meal in the middle of the day, and since many of us have younger brothers and sisters, we will plan for a lighter meal at supper time.

This will be a suggested menu for a fall day when the family is at home. If it were a school day and the children had taken their lunch at school, they would need a heavier supper. In this case the dinner and supper menus could be reversed. When this supper menu is served at noon it is called a lunch or luncheon.

We will plan for the same family of five suggested in "Hows and Whys." Review the breakfast in Problem V.

Since it is important to plan all three meals for the day at one time we will consider our breakfast and dinner menu along with the supper.
EXTENSION CIRCULAR 9-03-2

MEAL PLANNING AND PREPARATION

BREAKFAST, 7:00 A.M.
Tomato Juice
Oatmeal
Plain Muffins
Scrambled Eggs
Cocoa

DINNER, 12:00 NOON
Braised Beef with Potatoes and Carrots
Pickles
Butter
Bread
Prune Whip
Custard Sauce
Milk

SUPPER, 6:00 P.M.
Creamed Macaroni and Cheese
Whole Wheat Bread
Butter
Cabbage Salad
Peach Sauce
Cookies
Milk

COST OF FOOD FOR THE DAY

<table>
<thead>
<tr>
<th>Food Materials</th>
<th>Price Per Unit</th>
<th>Amount Used</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomato juice</td>
<td>$0.40 per No. 10 can</td>
<td>1 qt.</td>
<td>$0.12</td>
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<tr>
<td>Rolled Oats</td>
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<td>3/4 pkg.</td>
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<tr>
<td>Cream</td>
<td>.09 per half pt.</td>
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<tr>
<td>Milk</td>
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<td>.75</td>
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<td>Potatoes</td>
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<td>Carrots</td>
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<td>.03</td>
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<tr>
<td>Bread</td>
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<tr>
<td>Butter</td>
<td>.26 per lb.</td>
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<tr>
<td>Prunes</td>
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<tr>
<td>Cheese</td>
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<td>1 lb.</td>
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<tr>
<td>Cabbage</td>
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<tr>
<td>Peaches</td>
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<tr>
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<tr>
<td>Sugar for cereal</td>
<td>.05 per lb.</td>
<td>6 oz.</td>
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<tr>
<td>Muffins and dessert</td>
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<td>6 oz.</td>
<td>.05</td>
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<td>Salad dressing and</td>
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<td>dry ingredients for</td>
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<tr>
<td>Total cost for the family this day</td>
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<td>$2.33</td>
</tr>
<tr>
<td>Total cost per person for this day</td>
<td></td>
<td></td>
<td>.46</td>
</tr>
</tbody>
</table>

Our "Food Selection Score Card" gives us a basis for balancing the day's food values.

We served tomato juice instead of fruit for breakfast so we will plan to have fruit for dinner and supper.

Rolled oats were used for the cooked cereal and this counts as one serving of whole-grain products, and if we have whole wheat bread for dinner or supper we have met that requirement.

Eggs are served for breakfast, and if we have meat for dinner that will make one serving from each of two protein foods.

Milk is served on the cereal and in the custard sauce, and if it is also used as a beverage the full amount of milk will be consumed.

The vegetable group is the other important one on our score card and we will include three servings of vegetables, one of which is yellow and one green.

Does the day's menu on page 20 meet all requirements of the "Food Selection Score Card?" Foods which meet this standard are in heavy type. These are the foods necessary for good health but they do not represent a complete diet. Moderate amounts of fat, sweets, and other desirable foods should be added. The size of serving varies according to the needs of the person.

PLAN OF WORK

The plan of work for the dinner and supper might be as follows:

9:00 A.M. Wipe meat, sear in hot fat, add small amount of water; cover and place in oven or let cook on top of stove.
10:00 Make custard sauce and prune whip. Use left-over stewed prunes.
10:40 Prepare dinner vegetables (potatoes and carrots). Wash and trim cabbage for supper and put in a cool place.
11:00 Place vegetables in Dutch oven with meat.
11:10 Lay the table. Dessert may be placed on table, on service cart, or on side table.
11:45 Place pickles, bread, and butter. Pour water and milk.
12:00 Place meat on platter and surround with vegetables.
12:40 P.M. Clear table. Wash, rinse, wipe, and put away dishes.
5:00 Cook macaroni in boiling salted water. Prepare white sauce. Shred cabbage. Add dressing which was made the day before.
5:20 Lay table.
5:30 Drain macaroni. Add cheese to white sauce. Add macaroni. Keep hot.
5:45 Place salad and dessert. Dessert may be placed as at noon. Place bread and butter. Pour water and milk.
5:55 Place hot food.
6:00 Serve supper.
6:40 Clear table. Wash, rinse, wipe, and put away dishes.

The prices listed in this table were local prices, when this circular was written. Prices vary in different localities and at various times in each locality. When figuring the cost of your supper, use the prices which you are paying for groceries and the market value of home-produced foods.
EXTENSION CIRCULAR 9-03-2

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Tomato Juice
Oatmeal
Plain Muffins
Scrambled Eggs
Cocoa

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Butter
Bread
Prune Whip
Custard Sauce
Milk

SUPPER, 6:00 P.M.
Creamed Macaroni and Cheese
Whole Wheat Bread
Butter
Cabbage Salad
Peach Sauce
Cookies
Milk

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<td>Cheese</td>
<td>.20 per lb.</td>
<td>1 lb.</td>
<td>.04</td>
</tr>
<tr>
<td>Cabbage</td>
<td>.04 per lb.</td>
<td>1 lb.</td>
<td>.14</td>
</tr>
<tr>
<td>Peaches</td>
<td>.56 per No. 10 can</td>
<td>1½ pts.</td>
<td>.10</td>
</tr>
<tr>
<td>Cookies</td>
<td>.10 per dozen</td>
<td>1 dozen</td>
<td>.10</td>
</tr>
<tr>
<td>Sugar for cereal</td>
<td>.05 per lb.</td>
<td>6 oz.</td>
<td>.01</td>
</tr>
<tr>
<td>Muffins and dessert</td>
<td>.05 per lb.</td>
<td>6 oz.</td>
<td>.01</td>
</tr>
<tr>
<td>Salad dressing and dry ingredients for muffins</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total cost for the family this day</td>
<td>$2.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total cost per person for this day</td>
<td>.46</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Our "Food Selection Score Card" gives us a basis for balancing the day's food values.

We served tomato juice instead of fruit for breakfast so we will plan to have fruit for dinner and supper.

Rolled oats were used for the cooked cereal and this counts as one serving of whole-grain products, and if we have whole wheat bread for dinner or supper we have met that requirement.

Eggs are served for breakfast, and if we have meat for dinner that will make one serving from each of two protein foods.

Milk is served on the cereal and in the custard sauce, and if it is also used as a beverage the full amount of milk will be consumed.

The vegetable group is the other important one on our score card and we will include three servings of vegetables, one of which is yellow and one green.

Does the day's menu on page 20 meet all requirements of the "Food Selection Score Card?" Foods which meet this standard are in heavy type. These are the foods necessary for good health but they do not represent a complete diet. Moderate amounts of fat, sweets, and other desirable foods should be added. The size of serving varies according to the needs of the person.

PLAN OF WORK

The plan of work for the dinner and supper might be as follows:
9:00 A.M. Wipe meat, sear in hot fat, add small amount of water; cover and place in oven or let cook on top of stove.
9:20 Mix and bake cookies.
10:00 Make custard sauce and prune whip. Use left-over stewed prunes.
10:40 Prepare dinner vegetables (potatoes and carrots). Wash and trim cabbage for supper and put in a cool place.
11:00 Place vegetables in Dutch oven with meat.
11:10 Lay the table. Dessert may be placed on table, on service cart, or on side table.
11:45 Place pickles, bread, and butter. Pour water and milk.
11:55 Place meat on platter and surround with vegetables.
12:00 Serve dinner.
12:40 P.M. Clear table. Wash, rinse, wipe, and put away dishes.
5:00 Cook macaroni in boiling salted water. Prepare white sauce. Shred cabbage. Add dressing which was made the day before.
5:20 Lay table.
5:30 Drain macaroni. Add cheese to white sauce. Add macaroni. Keep hot.
5:45 Place salad and dessert. Dessert may be placed as at noon. Place bread and butter. Pour water and milk.
5:55 Place hot food.
6:00 Serve supper.
6:40 Clear table. Wash, rinse, wipe, and put away dishes.

The prices listed in this table were local prices, when this circular was written. Prices vary in different localities and at various times in each locality. When figuring the cost of your supper, use the prices which you are paying for groceries and the market value of home-produced foods.
MOTHER’S VACATION

Now that you realize how much time and thought it takes to plan and prepare the meals, wouldn’t you like to give Mother a rest for a few days from the cooking and house work? You have had the experience of preparing meals at different times, now would it not be interesting to have charge of preparing all of the meals for three days? You may choose any three days you wish, just so they follow each other in succession. Mother’s vacation will be an excellent time for you to bake bread. See the special place for recording other recipes in your record book.

It may be that Mother has been wanting to do some sewing or perhaps attend a Mother’s Vacation Camp. This will be a good chance for her to do either if you assume responsibility for the home. If Mother spends her vacation at home see that she has time to read and rest. Make plans with other members of the family. They may be anxious, as you are, to give Mother a vacation and will enjoy helping with the other housework. Explain the plans to her because she will be much more interested in them if she knows everything will be taken care of and that each member of the family is willing to share responsibility. Ask her for suggestions because you may have forgotten something.

Problem VIII—Cakes—Pastry

The mixing and baking of cake requires a great deal of care and judgment. In spite of this, cake recipes are frequently tried by beginners. It is a worthy accomplishment to be able to make a good cake but we shall be disappointed if any club member slight her other cooking lessons for this one. We know of a girl who is interested only in “fancy cooking” such as making cakes or candies, and she objects to preparing vegetables and making bread. We are glad to say that this girl is not a 4-H Club girl. Would you consider a girl who can make only one or two dishes well, a good cook? Cakes contain valuable food nutrients such as sugar and starch, but we can get along very well without them because we obtain these nutrients from many other sources. This is not true of vegetables and fruits since we do not always get the nutrients which they contain from other foods. And yet we have known girls who thought there was nothing to learn about cooking vegetables.

Have you noticed what a difference there is in cakes? Perhaps the same recipe made by different persons will look and taste differently. Why is this?

Accuracy is the secret of success. Use care in following the recipe exactly and pay attention to the simple rules of mixing and baking. Read again the suggestions about accuracy in problem I.

Economy is another standard discussed in problem I which we should keep in mind. Recipes in this problem are more expensive than many found in our other problems but we can be careful to select the more inexpensive ones and reserve the others for special occasions.

Saving time is also important. Are you watching the column in your record book which is called, “Number of minutes for preparation,” and trying to decrease the time? When we are learning how to prepare a new dish we often take more time than is necessary so let us try to beat our own record until we can make a recipe in a short time and still do the work well. Which would you rather hear mother say?—“My daughter works so quickly and does her work so well I like to have her cook” or “It takes her so long I’d rather do it myself.”

Review “General Directions for Batters and Doughs” in “Hows and Whys for Young Cooks,” Problem III.

Two classes of cakes are the butter cakes and sponge or angel food. The butter cakes are made with fat and the latter are made without fat.

LEAVENING

In connection with cake making it is interesting to think of the various ways of making products light. Three ways are as follows:

Production of carbon dioxide gas.—This is the gas produced by the action of soda or baking powder or yeast. When this gas is heated it expands and makes the mixture light and porous. Did you notice these gas bubbles when making quick breads and yeast breads?
**METHODS OF MIXING BUTTER CAKES**

**Conventional method.**—Fit a piece of oiled or other thin paper into the bottom of the pan. Oil the paper and sides of pan. Measure the ingredients. (What is the best order for doing this?) Sift the flour, baking powder, and salt together, place fat in the mixing bowl, add the vanilla to the milk. Combine the fat, sugar, and egg yolk as follows: Cream the fat with a wooden spoon until it resembles thick, smooth cream. Add about 2 T. of sugar to the softened fat and beat until the mixture looks fluffy (about one minute). Repeat until all of the sugar is mixed with the fat. Separate the egg whites from the yolks; place the yolks in the fat-sugar mixture and beat until they are thoroughly combined. Beat the whites until they are stiff but not so long that they lose their shiny appearance. The egg whites are beaten now rather than after the liquid and dry ingredients have been combined because egg white retains air longer than batter does. Combine the remaining ingredients as follows: Add the heaping tablespoon of the flour mixture to the fat-sugar-egg mixture. Stir until the flour is dampened, then beat until combined. Add about 2 T. of the milk; with a few gentle strokes mix it slightly with the other ingredients. Repeat this addition of flour and milk ending with a portion of flour.

**Variations.**—(1) Cream the fat with one-half of the sugar. The other half of the sugar is beaten with the egg and added to the batter last. More air is retained by this method. This is a good method when lard is used. (2) Add the unseparated eggs beaten or unbeaten to the fat-sugar mixture.

**Muffin method and quick or cake mixer method.**—By the muffin method, mix the same as for muffins, and with the quick or cake mixer method, soften the fat, but do not melt it, measure all ingredients, and mix in a cake mixer or bowl.

Which method shall I use? It depends upon the time we have to make a cake as well as the texture desired, and whether it is to be eaten warm or kept for several days. Let us see how these conditions influence the method which we should choose. For comparison we will use the conventional and the muffin methods. The conventional method gives a light, velvety cake which has a fine even grain and retains its moisture. The muffin method gives a cake which has a somewhat coarse texture and dries more rapidly. The time required for combining ingredients is much less with the muffin method.

**BAKING CAKES**

The baking of cakes is one of the most difficult parts of cake making. Even though the batter has been carefully prepared, the cake may be a failure if it is not baked properly. Review suggestions for baking quick breads, "Hows and Whys for Young Cooks," pages 29-32; they will also be helpful for cakes. If you do not have an oven thermometer continue using the flour test. Watch the baking closely.

A cake which is baking properly should rise evenly and be smooth on the top. If it rises in the center the oven is usually too hot or the batter may be too stiff. When the oven is too hot the sides of the cake become hardened before the mixture has had time to rise and sometimes the cake browns on top before it rises; then in attempting to rise, the batter breaks through the crust and causes a cracked cake. If a cake rises more on one side it shows that the heat is uneven or the shelf or floor of the oven may not be level. This may be overcome somewhat by turning the cake very carefully. Cakes containing molasses burn easily; to avoid burning, lower the temperature. A hot oven makes sponge cake, which is of small volume, tough and leathery because such cakes contain a large proportion of eggs.
which are toughened by high temperature. Cakes containing fat require a moderate oven and sponge cakes require a slow oven. As a rule it is better to have a lower temperature at the first of the baking to allow for rising. When the time is up, other tests should be made to make sure the cake is thoroughly baked. A cake is done when it shrinks slightly from the sides of the pan and is not dented in the center when touched lightly with the finger. A clean wire or toothpick may be run into the center of the cake. If it comes out without any particles of dough sticking to it, the cake is done.

Layer

Cup cakes

Loaf

Sponge and angel food

<table>
<thead>
<tr>
<th>Cake</th>
<th>Time</th>
<th>Oven Temperate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponge and angel food</td>
<td>60 minutes or more</td>
<td>Slow, 300° to 325°F.</td>
</tr>
<tr>
<td>Cup cakes</td>
<td>20 to 25 minutes</td>
<td>Moderate, 350° to 375°F.</td>
</tr>
<tr>
<td>Layer</td>
<td>20 to 30 minutes</td>
<td>Moderate, 350° to 375°F.</td>
</tr>
<tr>
<td>Loaf</td>
<td>40 to 60 minutes</td>
<td>Moderate, 350° to 375°F.</td>
</tr>
</tbody>
</table>

CARE AFTER BAKING

Let butter cakes remain in the pan for two or three minutes. Then carefully loosen the sides with a spatula or knife. Remove from pan and place on a rack to cool. A rack may be made of clean, fine-mesh wire turned at the corners enough to permit circulation of air. If the pan has been lined, remove the paper from the cake. Let sponge cakes remain in the pan until cool and stiffened so that they will not collapse when handled. Turn the pan upside down and leave until the cake is cool. An air space should be left between the pan and the table top.

PLAIN CAKE RECIPES

4-H Club folks will be interested in knowing that the Experimental Cookery class in the University worked out the plain cake recipes for this club problem.

PLAIN CAKE

Plain cake recipes are as follows:

**PLAIN CAKE**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>½ c.</td>
<td>1½ c.</td>
<td>general purpose flour</td>
</tr>
<tr>
<td>1 c.</td>
<td>2¼ c.</td>
<td>baking powder</td>
</tr>
<tr>
<td>2 eggs</td>
<td>½ t.</td>
<td>salt</td>
</tr>
<tr>
<td></td>
<td>½ t.</td>
<td>flavoring</td>
</tr>
</tbody>
</table>

Variation of the conventional method is satisfactory for all kinds of fat. The texture of this plain cake when made by the conventional method is finer than that of muffins but it does not have as fine or as even a texture as a richer cake. Sometimes try hard for the fat in this recipe. One-half t. salt is used if the fat is unsalted. Add more flavoring if desired. The method is as follows:

Sift flour, baking powder, and salt together. Remember to sift the flour before measuring.

To the fat add one-half of the sugar (½ c.), 1 T. at a time, beating after each addition until well creamed. Fat should be soft but not melted.

Combine the whole egg with the other half of the sugar in a smaller bowl and beat thoroughly.

Add the flavoring to the milk, then add the flour mixture and milk to the fat-sugar mixture as described in the directions for "Conventional Method" under "Methods of Mixing Butter Cakes."

Add the sugar-egg mixture and stir until thoroughly combined.

**VARIATIONS:**

**Plain cake**

Variations:

**White.**—Use 4 egg whites instead of 2 eggs. Use 1 t. flavoring instead of ½ t.

**Gold.**—Use 4 egg yolks instead of 2 eggs.

**Richer cakes.**—Here are two suggestions for a richer cake. In A, only the fat is increased, while in B the fat, sugar, and eggs are increased: (A) Use ½ c. fat instead of ½ c. (B) Use ½ c. fat, 1½ c. sugar, 3 eggs, instead of ½ c. fat, 1 c. sugar, 2 eggs.

**Richer cakes**

**Cup cakes.**—Any of these cakes may be baked in muffin tins or paper cups.

**FROSTING**

Uncooked frosting is easier to make than cooked but it is nice for club girls to be able to make both kinds. In making uncooked frosting with confectioner's sugar, care should be taken not to add too much liquid. You will see by the recipe that a very little liquid moistens a large amount of sugar.

**Uncooked Frosting**

<table>
<thead>
<tr>
<th>Amount</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 or 2 T. butter</td>
<td>1 T. milk or 1 egg white unbeaten</td>
</tr>
<tr>
<td>About 1 c. confectioner's sugar</td>
<td>Few grains of salt</td>
</tr>
<tr>
<td>½ t. vanilla</td>
<td></td>
</tr>
</tbody>
</table>

Cream the butter until soft, add about 1 c. of sugar and continue creaming. Then add the remaining ingredients and mix thoroughly. Continue adding sugar until the frosting is stiff enough to hold its shape when spread on the cake. If the frosting becomes too soft, add a few drops of liquid.

**Variations:**

1. Orange frosting—Use orange juice for liquid, add 1 or 2 grated orange rind. About ½ of an egg yolk may be added to color this amount.

2. Cream frosting—Use cream for liquid, increasing the amount by one-third.

3. Cocoa frosting—Use 1 T. cocoa, mixed with the sugar.

**7-Minute Frosting**

<table>
<thead>
<tr>
<th>Amount</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 T. cold water</td>
<td>1 egg white, unbeaten</td>
</tr>
<tr>
<td>½ t. cream of tartar</td>
<td>½ c. granulated sugar</td>
</tr>
<tr>
<td>Few grains salt</td>
<td>½ t. vanilla</td>
</tr>
</tbody>
</table>

Have water in the lower part of double boiler boiling. Place all ingredients except vanilla in the upper part and begin beating with a rotary egg beater. Continue beating for 7 minutes or until it just hold shape when dropped from the beater. Remove from heat, add vanilla, and continue beating until it is thick enough to spread on cake. The cream of tartar may be omitted.

**MIXING SPONGE CAKES**

Our problem in making angel food and sponge cakes is to get the egg white well mixed with the other ingredients without at the same time stirring out the air in the beaten whites. The expansion of air makes the cake light and if it is lost the cake will be heavy. If the egg whites are not well mixed with the other ingredients, the texture will be coarse and uneven because the air will not be evenly distributed through-
out the mixture. An excellent cake is one which is light and tender with a fine, even texture. The secret of such a cake lies in mixing with gentle movements and baking at a temperature which does not toughen the egg.

The cutting and folding motion explained in "Hows and Whys for Young Cooks," Problem III, is used for combining the ingredients of these cakes. A few other suggestions may be helpful. Tip the bowl slightly toward the right hand. Cut down the lower side of the bowl, let the egg-whip follow the bottom and opposite side of bowl, carry it across the top gently to avoid snapping off the mass of material clinging to it. Turn the bowl a little each time so that a new portion of the mixture comes in contact with the whip. Egg white holds more air when beaten with an egg whip rather than a rotary beater. Since the method varies somewhat with sponge cakes (when the whole egg is used) and angel cakes, the detailed method is given under each recipe.

SPONGE CAKE

1 c. cake flour or ¾ c. general purpose flour
1 c. fine granulated sugar
5 medium eggs

Do not oil the baking pan. Sift and measure the flour. Sift and measure the sugar, then mix half of it with the flour. Separate whites from yolks; place the yolks in the mixing bowl and the whites in another bowl. Measure the salt and cream of tartar. Beat the egg yolks until they are stiff and light yellow.

Add the sugar in four portions. After each addition, beat with the egg-beater until the mixture thickens. When all the sugar has been added, the mixture should be so thick it will hold its shape.

Add the boiling water a tablespoonful at a time, beating after each addition. While this mixture cools, sift the salt and cream of tartar over the egg whites and beat with a wire eggwhip or rotary beater until they are stiff but not until they have lost their shiny appearance.

Beat the yolks-sugar-water mixture until it is very stiff. Add about ⅔ of the flour-sugar mixture to the yolk-sugar-water mixture. Stir with a wooden spoon until the dry ingredients are dampened; then beat. Add the rest of the flour-sugar mixture in the same way.

Add the beaten egg whites and vanilla. Using the wire whip, fold until the whites and egg whites and yolk-sugar-water mixture are stiff but not until they have lost their shiny appearance.

Beat the egg-white-sugar mixture until it is very stiff. Add about ⅔ of the flour-sugar mixture. Stir with a wooden spoon until the dry ingredients are dampened; then beat. Add the rest of the flour-sugar mixture in the same way.

Immediately turn the batter into the pan. Lift the last portion lightly from the bowl into the pan, being careful not to stir it. Bake at 300° to 325°F. for about 1 hour. Use the same test as for sponge cake.

SCORE CARD FOR CAKES

1. General Appearance .......................................................... 20%
   Color—uniform but varies with kind
   Sponge cake slightly lighter in color than butter cake
2. Lightness—suitable relation of weight to size .................... 15%
   Quality—tender, thin, crisp, smooth
3. Crumb .......................................................... 30%
   Color—uniform but varies with kind
   Texture
   Fine, small cells, uniform in size
   Tender
   Elasticity—soft, springs back when pressed
   Somewhat more marked in sponge cakes
   Moisture—slightly moist but not doughy
4. Flavor—no flavor used to excess .................................. 35%
   Taste—agreeable
   Odor—delicate

PLAIN PASTRY

¾ c. general purpose flour
3 to 4 T. cold fat
1 t. salt

This recipe makes one medium-sized crust.

Get the necessary ingredients and utensils. Dust a thin layer of flour over the rolling pin and board. No more than 1 T. of flour should be used during the entire rolling process. Sift and measure the flour. Measure the salt. Turn them into the mixing bowl.

Measure the fat and add to the flour. Measure the water. Combine the ingredients as follows: Mix the fat, flour, and salt by cutting with two knives. Hold one in each hand with the blades crossed, cutting back and forth through the mixture until it is separated into particles, none of which is larger than a navy bean.

Add the water to the fat-flour mixture slowly—about ½ t. at a time, sprinkling it over the dry material. With a fork, gently bring the damp portion in contact with the dry material until the whole mixture is uniformly dampened.

Press all the fat-flour particles firmly together. Do not handle the dough more than is necessary. If two crusts are being prepared, divide the mixture into two equal portions.
Shape and roll as follows: Lay a ball of dough on the floured board; pat until it is flat on top. If the edge begins to split, pinch the cracks together. Place the rolling pin lightly on the center of the dough and roll toward the edge with short strokes, keeping the shape round. When the dough begins to stick to the board (indicated by its failure to spread out as the rolling pin passes over it) loosen it gently along one edge with the side of a spatula. Turn the freed portion over the palm of the left hand and rest it there while the remainder of the crust is loosened and the board redusted with flour. Continue rolling until the crust is about ¼ inch thick. Loosen it from the board.

Place the lower crust in the pan. Fit it carefully into the angle between the side and bottom of the pan, pressing it down into the crease with the fingers of one hand while the other hand holds the sheet away from the sides so it will not be stretched or broken.

Treatment of crust for different pies:
(1) For a one-crust pie in which the crust is baked separately, trim off the pastry so the edge covers the edge of the pan. Leave the rim plain or press it with the tines of a fork or trim the pastry about ¼ inch larger than the pan, roll the extra dough onto the rim of the pan, and pinch portions of it together with the fingers and thumb into a fluting that stands above the edge of the pan. If baked with a pan of the same size placed over the crust, not inverted, it is not necessary to prick the crust. If baked without the pan, prick the sides and bottom in several places to prevent bulging. Watch the crust carefully if it is not covered by another pan. During the first part of the baking, while it is still soft, prick wherever it bulges.

(2) For a one-crust pie in which the crust and filling are baked together, prepare the edge as above. Add part of the filling. Place the pie on the oven rack, being careful to have the rack level. Add the rest of the filling. Bake at a temperature suitable for the filling.

(3) For a two-crust pie, roll the second portion of the dough in the same manner as the first into a sheet ¼ inch thick. Loosen from the board and cut small holes in the edge as above. Add part of the filling. Place the pie on the oven rack, being careful to make it touch the crust around the edge of the pie. Brown the meringue in an oven at 300°F. This takes about 15 minutes. We use a slow oven so the egg will not be toughened.

APPLE PIE

2 c. sliced apples (4 or 5 apples) 1 T. flour
½ c. sugar (increase for sour apples) 1 T. butter
⅛ t. nutmeg or cinnamon

Line a pie tin with pastry. Add the apples in about three layers. Sprinkle each layer with the sugar-flour-spice mixture and small pieces of butter. Some apples require a little water, 1 or 2 t. to the pie. The amount of sugar varies with the tartness of the apples. Bake in a hot oven, 425°F., for about 10 min.; then a medium oven, 350°F., until the apples are tender and the crust is a golden brown. Test apples by sticking a toothpick through a hole in the upper crust.

HOT WATER PASTRY

¾ c. flour 3 T. boiling water
3 T. fat ¾ t. salt
¼ t. baking powder

Baking powder gives a more porous crust and may also be used in the plain pastry recipe.
Place the boiling water and fat in a mixing bowl and beat until creamy. Add the sifted dry ingredients. Beat until a smooth ball is formed. Chill before rolling.

SCORE CARD FOR PIES

1. General Appearance—appealing
   Perfect Score

   Color—delicate, golden brown
   20%

   Crust—somewhat rough and blistered rather than smooth and firm
   20%

2. Crust
   Thoroughness of baking
   Texture—flaky, tender, crisp
   Flavor—free from rancidity or greasiness
   40%

3. Filling
   Depth—not less than ¼ inch
   Consistency—soft but firm enough to hold shape when cut, fruit pies fairly juicy
   Flavor—characteristic of ingredients, no flavor used to excess
   40%

Total 100
Problem IX—Meats—Fish—Dinner—Buffet
Supper—Food Record

We have discussed the planning and preparation of breakfast and supper. In this problem we shall take up the dinner. Since a dinner menu is usually built around the meat dish, we shall briefly discuss meats, fish, and poultry before planning the club member's dinner.

Meats are grouped with other protein foods, such as cheese, eggs, dried beans or peas, on our "Daily Food Selection Score Card." We select one serving of any two of these foods each day in order to get the amount of protein that our bodies need. Meat is about one-third to one-half dry matter. Let us see what food nutrients it contains.

**Food Value of Meat**

**Protein.**—The amount of protein in meat varies from less than one-sixth in fat cuts to about one-fifth in lean cuts. If you review the uses of food in the body you will see that protein foods build and repair muscular tissue.

**Fat.**—Meat contains fat, which is an excellent energy food; that is, it produces heat and energy in the body. Fat not only influences the nutritive value of the meat but very materially increases its juiciness, tenderness, and flavor. Fat is one of the principal factors determining meat quality.

**Minerals.**—Meat is an excellent source of iron and phosphorus but is very low in calcium. Liver is an extremely rich source of iron and copper.

**Vitamins.**—The glandular organs, such as liver and kidneys, are very good sources of vitamin A and superior to muscle for B and G. Muscle meats are a good source of vitamins B and G.

**Extractives.**—The flavor of meat is due to extractives. They have no food value but are an aid to good digestion, since they stimulate the flow of the digestive juices. Extractives also serve to stimulate the appetite.

Thus we see why meat served with cereal grains, milk, fruits, and vegetables makes a well balanced or adequate diet.

**Structure of Meat**

This simple experiment will help one to understand the structure of meat. Scrape a small piece of lean meat with a dull knife or spoon. Compare the two parts of the meat as to color and tenderness. The soft red part is called muscle fiber and the tough gray substance is connective tissue. Haven't you pulled these shreds or fibers apart in a piece of boiled meat? The strong connective tissue holds them in place. When we place these fibers under a microscope, we find they are little tubes which hold the muscle juice. The connective tissue forms a network, holding the muscle fibers and fat cells together. Lean meat contains some fat. The muscles which the animal used most are less tender because they contain more connective tissue. Muscles also become less tender as an animal grows older.
CARE OF MEAT

Meat is a moist protein food which spoils easily when not properly cared for. If it is kept too long or kept in a place which is not the right temperature, poisons may develop which cause serious illness.

When we buy meat, we should remove the wrapping as soon as we get home. The wrappings not only absorb some of the juices, but may give the meat an unpleasant odor and taste. Meat should be kept in a clean, dry, cool place but it is best not to put it in direct contact with ice. Contamination by soiled hands, clothing, or utensils lowers the keeping quality. Meat spoilage is due to bacteria, molds, and enzymes. These agencies require food, water, and a suitable temperature for growth and action. Their required food and water are present in meat; to prevent spoilage reduce the temperature to as nearly 32° F. as possible. The temperature of the refrigerator should not be above 50° F.

**Cuts of Beef**

<table>
<thead>
<tr>
<th>Cuts of Beef</th>
<th>Characteristics</th>
<th>Methods of Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neck</td>
<td>Juicy, good flavor.</td>
<td>Soups, stewing, corning, and mince meat.</td>
</tr>
<tr>
<td>Chuck</td>
<td>Good quality meat, but contains more connective tissue than cuts from hind quarter. Muscle fibers run in various directions so steaks cannot be cut across the grain. Low in fat but rather high in percentage of bone.</td>
<td>Pot roasts, stews, simmering.</td>
</tr>
<tr>
<td>Rib</td>
<td>Rich flavor, very tender. A large muscle known as the “eye” and the rib make it easy to identify the prime rib roasts.</td>
<td>Oven roasts.</td>
</tr>
<tr>
<td>Plate:</td>
<td>Lean and fat are deposited in alternate layers. Cuts usually contain ends of ribs and sections of breast bone. Fat is sweet and desirable in boiling meat.</td>
<td>Boned and rolled “short ribs,” pot roasts, stews, corning.</td>
</tr>
<tr>
<td>Brisket Rib ends</td>
<td>Bone and gristle, varying amounts of lean.</td>
<td>Soups, stews.</td>
</tr>
<tr>
<td>Fore Shank</td>
<td>Round or oval in shape with a small round bone and a large proportion of lean. Tender, juicy, good flavor. “Top round” is the more tender, and has one large muscle while the “bottom round” has two muscles.</td>
<td>Steaks—Swiss, Spanish. Corning, pot roast, stews.</td>
</tr>
<tr>
<td>Round</td>
<td>Somewhat wedge-shaped, juicy, good quality but contain about 25% bone.</td>
<td>Corning, pot roast, stews.</td>
</tr>
<tr>
<td>Hind Shank</td>
<td>Large amount of bone and connective tissue.</td>
<td>Stews, soups.</td>
</tr>
</tbody>
</table>

**Cuts of Pork**

<table>
<thead>
<tr>
<th>Cuts of Pork</th>
<th>Characteristics</th>
<th>Methods of Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feet</td>
<td>Bone, skin, and fat. Small amount of meat but delicate.</td>
<td>Fresh—steaks and roast. Cured—baked, boiled, pan broiled.</td>
</tr>
<tr>
<td>Hams</td>
<td>Solid meat, little bone. Usually cured.</td>
<td>Large percentage of fat. Cured as salt pork. Used as larding fat. Salt pork, pan fried, boiling, seasoning for other foods.</td>
</tr>
<tr>
<td>Fat back—thick slice of fat removed in one piece</td>
<td>Fat and lean streaked. Cured as bacon.</td>
<td>Broiled or pan fried.</td>
</tr>
<tr>
<td>Clear bellies, as flank and plate of beef</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loin</td>
<td>Contain backbone, ribs, and tenderloin. Small amount of fat on outside. Tender, lean meat. Sometimes boned and cured as Canadian back bacon.</td>
<td>Roasts, chops.</td>
</tr>
<tr>
<td>Shoulder—Picnic ham</td>
<td>Large percentage of lean. Good flavor.</td>
<td>Fresh—roasted. Smoked—cooked like ham.</td>
</tr>
<tr>
<td>Boston butt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butts</td>
<td>Cut from top of shoulder.</td>
<td>Steaks, roasts.</td>
</tr>
<tr>
<td>Jowl</td>
<td>Salted and cured. Known as bacon squares.</td>
<td>Pan fried, seasoning with vegetables.</td>
</tr>
<tr>
<td>Spareribs</td>
<td>Lean and fat. Good flavor. Not much meat.</td>
<td>Baked or boiled.</td>
</tr>
<tr>
<td>Tenderloin</td>
<td>Choice, lean, tender, boneless. Sold as part of loin roast or separately.</td>
<td>Broiled, pan fried, roasted.</td>
</tr>
<tr>
<td>Fat</td>
<td>From one-tenth to one-third of the hog carcass is made into lard. High quality fat for all cookery.</td>
<td>Frying, shortening.</td>
</tr>
</tbody>
</table>
MEAT COOKERY

There are four general aims in meat cookery. These general aims are: to improve appearance, to develop the flavor and make more palatable, to sterilize (essential with pork), and to soften the connective tissue.

In addition to these general aims there are several special aims of meat cookery. In cooking tender cuts of meat the aim toward which one strives is the retention of tenderness. This is accomplished by using dry heat. The several methods of dry-heat cookery include roasting, broiling, and pan broiling. In cooking less tender cuts of meat, the aim is to soften the connective tissue and increase the tenderness. Moist heat softens connective tissue. Several methods of cooking with moist heat include braising, stewing, and simmering. Mechanical methods of increasing the tenderness of meat are marinating, pounding, and grinding.

The aim in cooking soup meat is to extract nourishment. To cook soup meat, the bones should be cracked, the meat started in cold water, and simmered for some time.

Some principles influencing meat cookery:
Dry heat toughens connective tissue.
Moist heat softens connective tissue.
Weak acids as tomato juice and vinegar tend to break down connective tissue.
Grinding or pounding divides or breaks the connective tissue.
Cold water dissolves part of the mineral salts, the soluble albumin, and extractives.
Ripening or aging while stored softens the meat fibers.

Terms used in meat cookery:
Roasting—cooking uncovered in an oven without the addition of water.
Broiling—cooking uncovered by direct heat from hot coals, gas flame, or electric element.
Panbroiling—cooking uncovered in a hot frying pan, pouring off fat as it accumulates in the pan.
Braising—cooking covered in a small amount of water after browning in a small amount of hot fat.
Stewing—cooking, covered, in water at simmering temperature, which is below boiling.
Simmering—cooking in water.
Searing—browning the surface of meat quickly in order to develop flavor and improve appearance.
Marinating—soaking (for some time before cooking) in a mixture of vinegar, oil, and seasonings, or vinegar and oil, or vinegar and water in order to soften connective tissue and develop flavor.
Larding—placing strips of fat on top of, or inserting the fat into, meat in order to add flavor and juiciness.

Recent experiments in roasting meat.—The United States Department of Agriculture and twenty-six state agricultural stations in establishing a standard method of roasting have changed some of the older ideas concerning temperatures and searing in meat cookery, as follows:

Recent experiments with seared and unseared meats show that searing:
Increases loss of juice and
Increases shrinkage but
Improves outside appearance and
Develops aroma and flavor in outside slices.

TIME-TABLE FOR ROASTING

A time-table, at best, is not an entirely satisfactory guide to the cooking of meat. A meat thermometer (for oven roasting only) inserted into the largest muscle of a roast measures the "doneness" most accurately. The time per pound will vary with different factors, some of which follow:

In general, a larger roast requires less time per pound than a smaller roast.
A thick compact piece of meat requires more time per pound than a less compact piece of the same weight.
A roast with bone will cook in a shorter time than a piece from which the bone has been removed.
Roasts with a large amount of fat cook more quickly than lean roasts.
Roasts cooked at low temperature require a little more time per pound.
Meats placed in a utensil in a frozen condition require considerably longer time for thorough cookery.

The approximate time required for cooking a 3 to 4 lb. roast well done is as follows:

<table>
<thead>
<tr>
<th>Meat</th>
<th>Min. per lb.</th>
<th>Meats</th>
<th>Min. per lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh pork butts</td>
<td>50 to 55</td>
<td>Beef</td>
<td>25 to 30</td>
</tr>
<tr>
<td>Ham or shoulder</td>
<td>30 to 35</td>
<td>Veal</td>
<td>25</td>
</tr>
<tr>
<td>Cured ham, small</td>
<td>25 to 30</td>
<td>Lamb</td>
<td>30 to 35</td>
</tr>
<tr>
<td>Cured ham, large</td>
<td>20 to 25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ROAST MEAT

To prepare a roast for cooking, rub with a mixture of 2 parts flour to 1 part salt. Place it fat side up in a shallow pan so that the roast will do its own basting. Place uncovered pan in the center of oven. A low oven temperature, about 300° to 350° F., is considered best for the entire cooking period.

BRAISED BEEF OR POT ROAST

Beef chuck, ribs, round or rump, 4 to 6 pounds.
Wipe with damp cloth, rub with salt, pepper, and flour.
Brown in heavy kettle in small amount of fat.
Slip a low rack under meat; add ½ c. water.
Cover tightly and simmer until tender.

Time—about three hours. Turn occasionally.

Drippings should cook until brown for gravy.

**SWISS STEAK**

1 3/4 lbs. beef round, about 1 inch thick

1/2 c. boiling water

2 T. bacon, fat or lard

1 1/4 c. flour

1/4 c. bread crumbs or oatmeal

1/2 t. salt

1/4 t. pepper

Beef may be cut into individual servings or left in one piece. Dredge with flour, salt, and pepper. Sear in hot fat in heavy skillet or kettle. Add boiling water. Simmer on top of stove or in oven tightly covered, about 2 hrs., or until tender.

**Variations.**—Onions may be browned in the fat before searing the meat if desired. For Spanish steak use tomato juice for the liquid and add more seasonings, such as a bit of bay leaf, peppercorns, a clove or two, and allspice.

**MEAT LOAF**

1 egg

1/2 c. water or tomatoes

1/2 lbs. chopped beef

1/2 lbs. chopped pork

4 slices bacon

Pepper

Salt

Beat the egg in a mixing bowl; add the water and mix. Add the other ingredients and mix well. Shape into a loaf. Grease baking pan and place the loaf in pan. Put slices of bacon on top and bake slowly uncovered for about 1 1/2 hours.

Serve with tomato sauce—stew slowly for 10 minutes 2 c. tomatoes, 2 T. chopped onion, and a bay leaf. Rub through a strainer and use for the liquid in making the sauce. Other ingredients for sauce are: 2 T. butter or drippings, 2 T. flour, and 1/3 c. water or tomatoes.

**LONG STEW**

1 lb. beef, lamb or veal

3 T. flour

3/4 c. diced tomatoes

1/2 pt. diced carrots

1/2 pt. diced potatoes

1/2 pt. diced turnips

2 c. diced carrots

Wipe meat with damp cloth. Cut into cubes. Roll cubes in flour and brown in bacon fat or suet. Stir so it will be browned on all sides. Add the hot water cautiously and simmer until the meat is nearly tender, about two hours. Add the salt and vegetables and mix well. Shape into a loaf. Grease baking pan and place the loaf in pan. Put slices of bacon on top and bake slowly uncovered for about 1 1/2 hours.

Serve with tomato sauce—stew slowly for 10 minutes 2 c. tomatoes, 2 T. chopped onion, and a bay leaf. Rub through a strainer and use for the liquid in making the sauce. Other ingredients for sauce are: 2 T. butter or drippings, 2 T. flour, and 1/3 c. water or tomatoes.

**MEAT LOAF**

1 egg

1/2 c. water or tomatoes

1/2 lbs. chopped beef

1/2 lbs. chopped pork

4 slices bacon

Pepper

Salt

Beat the egg in a mixing bowl; add the water and mix. Add the other ingredients and mix well. Shape into a loaf. Grease baking pan and place the loaf in pan. Put slices of bacon on top and bake slowly uncovered for about 1 1/2 hours.

Serve with tomato sauce—stew slowly for 10 minutes 2 c. tomatoes, 2 T. chopped onion, and a bay leaf. Rub through a strainer and use for the liquid in making the sauce. Other ingredients for sauce are: 2 T. butter or drippings, 2 T. flour, and 1/3 c. water or tomatoes.

**BROWN STEW**

1 lb. beef, lamb or veal

3 T. flour

2 c. diced tomatoes

1 1/2 pts. hot water

Wipe meat with damp cloth. Cut into cubes. Roll cubes in flour and brown in bacon fat or suet. Stir so it will be browned on all sides. Add the hot water cautiously and simmer until the meat is nearly tender, about two hours. Add the salt and vegetables and mix well. Shape into a loaf. Grease baking pan and place the loaf in pan. Put slices of bacon on top and bake slowly uncovered for about 1 1/2 hours.

Serve with tomato sauce—stew slowly for 10 minutes 2 c. tomatoes, 2 T. chopped onion, and a bay leaf. Rub through a strainer and use for the liquid in making the sauce. Other ingredients for sauce are: 2 T. butter or drippings, 2 T. flour, and 1/3 c. water or tomatoes.

**LIVER**

Dip slices of liver in flour seasoned with salt and pepper and cook slowly in bacon drippings.

Liver may be prepared as above, browned lightly on both sides, then placed in a casserole or covered baking pan. Add a thin tomato sauce, cover, and bake slowly until the liver is tender. Stewed tomato may be added instead of the tomato sauce and then thickened if desired, before serving.

Liver loaf may be made like meat loaf, using 1 lb. of chopped liver and 1/2 lb. chopped beef or pork instead of 1 1/2 lbs. chopped beef.

**CREAMED MEAT ON TOAST**

Remove dry pieces of skin and gristle from cold meat and chop or cut in small pieces. Add to thin white sauce, or gravy left from roast, reheat, and pour over slices of toast.

**POULTRY**

These directions may be used in preparing chicken to stew, fricassee, or fry:

Singe to remove hairs by holding over a flame. Remove pin-feathers with the point of a knife or tweezers and wash the skin thoroughly.

Remove the feet, wings, drumsticks, and thighs, cutting through the joints. Separate the gullet and windpipe from the neck by running the index finger around under the skin.

Separate the body by removing the shoulder blade and cutting carefully between the breast and back, through the white spots of the ribs on each side, to and around the vent. Remove the digestive tract, being careful not to break the intestines.

Separate the wishbone from the breast by inserting the knife at the upper end of the breast bone, cutting down through the flesh and turning the knife outward to disjoint it.

Disjoint the neck from the back and remove the lungs and kidneys.

Cut the oil bag from the tail.

Separate the giblets, that is, the heart, gizzard, and liver, from the intestines. Cut the tough membrane from the heart. Cut through the gizzard to the inner sac, which should be removed without breaking. Cut the gall bladder from the liver, taking care not to break or cut it. Even a small amount of gall will make the meat taste bitter.
STEWED FOWL
Clean and cut in pieces. Cover with boiling water and simmer 15 minutes. Add 1 t. salt, cover, and simmer 1½ to 2 hours or until tender. To thicken the gravy, add flour and water stirred to a thin smooth paste. The amount of flour depends on the amount of liquid and the thickness desired. If there is more broth than is needed for gravy it may be saved for soup. Add more salt if desired.

FRICASSEED FOWL
Dredge each piece of fowl with flour. Heat some lard, chicken, or bacon fat and butter in a frying pan and brown the pieces evenly. Carefully add enough water to cover and about 1 t. salt. Cover the pan and cook at simmering temperature for 1½ to 2 hours or until tender. Add more water if needed. If the fowl is tough, longer cooking may be necessary. When testing, stick a fork into the thickest piece. The broth may be thickened for gravy.

Chicken may be cooked by browning in fat, but unless it is very young it is not sufficiently cooked by merely browning. Fricassee chicken which is steamed and simmered as well as browned has the flavor of fried chicken but is more tender.

Variation.—Fricassee chicken may be cooked in the oven. After browning, place the pieces in a baking dish or casserole, and pour boiling water over them. Cover and bake in a slow oven 2 hours or until tender. Less water is required when cooking in the oven than when cooking on top of the stove.

FISH
To clean fish, remove gills, scales, and fins with a sharp knife, beginning at the tail. Split the under side and remove the entrails. Wash thoroughly inside and outside in cold water. Do not let the fish stand in cold water after washing. Dry with a clean towel. If the fish is to be boiled or sautéed, cut off head and tail, and split down back. If it is to be baked whole, remove eyes.

BAKED FISH
Cat fish, white fish, or any other large fish is suitable to stuff and bake. Clean and wash, remove bones if desired, and wipe dry. Sprinkle lightly with salt both inside and out, stuff and hold together with tooth picks. Cut 3 diagonal gashes across the top. Place on cheese cloth in a greased pan. This makes it easier to remove without breaking. Bake in a moderate oven, allowing about 20 min. per pound.

STUFFING
2 c. dry bread crumbs 1 T. onion juice or finely chopped onion
4 T. butter, melted 1 t. parsley
½ t. salt 1 t. pickles
½ t. pepper 1 T. chopped pimento

BAKED HALIBUT WITH TOMATO SAUCE
2 lbs. halibut 3 T. butter
2 c. tomatoes 3 T. flour
1 c. water ½ T. sugar
1 T. chopped onion ½ t. salt (scant)
3 cloves ¼ t. pepper

Cook the tomatoes, water, onion, and cloves for 20 minutes. Strain. Melt the butter, add flour, and mix. Stir into the hot mixture. Add sugar, salt, and pepper and bring to boiling.

THE CLUB MEMBER'S DINNER
The meal requirement for this problem will be to plan, prepare, and serve a dinner, work out the cost and plan of work as you did for the supper, and report it in your record book. This may be a simple dinner served to the family, or a more elaborate one with invited guests. The meals discussed in Problem VII are everyday home meals. How would you like to work out a new idea for the dinner? Some clubs enjoy serving a Mother-Daughter or Father-Daughter dinner. The following menu is suitable for such an occasion.

MASHED POTATOES
2 c. cooked flaked fish 2 c. medium white sauce
1 c. buttered crumbs

Scalloped Fish
Salmon or white fish, tuna, halibut, or any other fish may be used. Butter baking dish. Arrange fish, white sauce, and crumbs in alternate layers until the baking dish is ¾ full. Cover with buttered crumbs and brown in moderate oven.

Variation.—Cooked rice, shredded wheat, or cracker crumbs may be substituted for bread crumbs.

MEAL PLANNING AND PREPARATION
We learned that when we plan a certain meal it is important to consider other meals as well. In fact it is well to plan meals for several days at a time because if some essential food is lacking one day we can supply it in the next day's menu. However, since this dinner is for a special occasion, we will not include the breakfast and supper plan in the discussion. It is to be a three-course dinner, planned, prepared, and served by club girls for their mothers. It will be served in one of the girls' homes but you want it to be a real treat to your mothers so decide to do all of the work connected with it yourselves. There are various ways of dividing the work, for a Mother-Daughter dinner, among the club girls. Your club leader will help you work out the plan best suited to local conditions. The following discussion is only suggestive. A club of eight girls might divide the work equally before and after the dinner and then have two girls act as waitresses, three as kitchen helpers, and the other three would eat dinner with the guests and be responsible for their entertainment.
LAYING THE TABLE AND SERVING

Rules for laying the table given in "Hows and Whys for Young Cooks" will not be repeated but some things will be added to make the explanation of our dinner service complete. Doilies or luncheon sets may be used for breakfast and luncheon, but a tablecloth with silence pad is better for dinner. Sometimes the salad is served as a separate course, but since most of us would enjoy this salad with the main course, we will serve it that way and have it placed on the table when the guests are seated. Figure 3 is a diagram of one cover or place at the table.

The dinner knife and fork are placed next to the plate and mark the cover. If a salad fork is used it may be placed at the left of the dinner fork. Since we are not using a bread and butter plate for our dinner, the salad plate is placed near the tip of the fork. When both are used, the salad plate may be placed near the bread and butter plate on the left. Remember to place the hemmed edge of the napkin toward the fork and edge of the table. Place salt and pepper shakers at convenient intervals between covers and on a line with the water glasses.

Fill the water glasses and place the salad just before the meal is announced. Sunset salad is composed of grated pineapple and carrot molded in prepared lemon gelatin and adds to the attractiveness of the table.

Place cards help to simplify the seating when the group is large. If they are used, we may be sure that our guests are seated the way we want them. Put place cards on the napkin or above the plate.

If a cocktail or salad is served as a first course, it is placed before the guests are seated. If something hot, as soup, is served first it is generally placed after the guests are seated.

For this suggested dinner we have the table set for twelve—eight mothers, the leader, and three club girls. You see these club girls are planning to practice so well beforehand that they will be able to manage the dinner service without the help of their leader. Each waitress will serve six guests. To save time and steps, dishes may be placed and removed from two covers at a time. To make our directions clear we will speak of the club girls as cooks, waitresses, and hostesses. The waitresses watch and tell the cooks when to start dishing up the food.

When the guests are ready, the waitresses take a soup plate, which is placed on a service plate, in each hand and enter the dining room. A dish is carried with the thumb resting on the edge of the plate. Where there is more than one waitress, it makes a nice appearance for them to place and remove dishes at the same time. They may begin at opposite ends of the table and proceed by going to the left side of the guest and placing the soup with the left hand. While doing this the right hand is behind the guest. Then passing to the next guest, the waitress shifts the plate from her right hand to the left and places it at the left as she did before. In this way each waitress serves six guests by making three trips to the kitchen. Beginning with the first guests served, the waitresses then pass crackers to the left of each guest. Hold the plate low enough so that the guest may easily help herself.

There are always many things to do when a dinner is being served; therefore it is a good plan to do everything beforehand which can be done early. The meat may be sliced and keep warm. Rolls may be buttered. Dinner plates are kept where they will be warm when needed. Two cooks place food on the dinner plates while the third prepares the gravy and rolls to be passed. The dinner plate contains a serving each of roast beef, mashed potatoes, and buttered greens. Food should be placed on the plate attractively. A small amount of gravy may be placed in a depression made in the center of the mashed potatoes.
The waitresses remove the first-course plates from the left as they were placed. After removing the first plate they shift it from the left hand to the right; then passing to the next guest remove her plate with the left hand and take the two to the kitchen. A general rule for serving is to remove everything pertaining to one course before serving the next course, so after taking the last two soup plates to the kitchen, the waitresses return with two dinner plates. These are also placed from the left of the guest with the left hand. After placing the last dinner plates each waitress brings a plate of buttered rolls from the kitchen and passes it to the left of each guest. A dish of gravy may also be passed to the left in case someone cares for more. The waitresses may pass rolls again if they see they are needed. Water glasses are refilled where necessary. Milk is then served and placed at the right near the water glass, using the right hand for placing. When refilling water glasses it is best not to lift them from the table, but if it is difficult to fill them they may be moved nearer the edge of the table. When moving the glass, grasp the lower part so that your fingers do not touch the rim.

When all have finished the main course, the dishes are removed in the same manner as before, only this time the salad plates are removed. Waitresses may remove from two places at a time if they are careful. The guest should leave her knife and fork placed across the edge of the dinner plate. Remove the dinner plate with the left hand, place it in the right hand; remove salad plate and place it on the dinner plate. Then go to the next guest, remove salad plate and place it on the other salad plate, which is in the right hand, remove the dinner plate and take them to the kitchen. In this way we are able to remove from two places each time and also avoid piling dishes in front of the guest. One spoon should be left at each place after the main course has been removed, but in case it has been removed, another should be placed at the right before the dessert is placed. Extra silver should be brought in on a tray covered with a doily.

If crumbs need to be removed, this should be done before the dessert is placed. Use a napkin and small plate, working at the left of the guest. The brown betty is in a sauce dish placed on a dessert plate and it is also placed in front of each guest from the left.

There are many things which help to make a pleasant dinner party besides the food. The club girls acting as hostesses plan beforehand to do their share toward keeping up a pleasant conversation at the table. Mothers are always interested in club activities and each girl can tell about something the club has done or planned for the future. At a large dinner it is possible to talk with only those near you, but with twelve guests it is often possible for the person who is speaking to be heard by all. If some of the group have not met, they should be introduced when they arrive. The leader and mother, at whose home the dinner is held, may help with the hostesses' duties but the girls to whom this part is assigned should take the initiative and do their share. Hostess duties do not end until the guests have gone. However, duties may be changed after dinner. For example, the cooks may then act as hostesses and the first hostesses may wash and put away the dishes. Each girl does her share of the finishing so that everything is left clean and in order.

**THE BUFFET SUPPER**

On such occasions as family reunions and club suppers there usually are more people than can be seated conveniently and comfortably at the dining room table. Often, too, dinner-style service is inconvenient because of limited time, space, linen, dishes, or silver. The buffet luncheon or supper is recommended for such situations. This is an informal type of service in which the table from which the food is served is the center of interest. Small tables to which guests may go with their filled plates may be placed about one or more rooms and the porch, or the trays or plates may be held on the lap.

Perhaps, if you have entertained your fathers at a dinner, you should honor your mothers at a buffet meal. In this form of service all of you could be seated with your mothers and eat together. Two girls could serve at the dining room table and others act as waitresses afterward. You might plan for these waitresses to arrange the dining room and small tables before the meal, for three or four others to prepare the food, and for the rest of the girls to wash dishes and straighten the kitchen and dining room.

The arrangement of the dining room table depends upon the plan of service you use. Plan A (page 46) represents an arrangement suited for tray service. Note that all foods, silver, and napkins are taken during the first trip around the table. Guests may return for second servings if they desire or waitresses may take dishes of food, one at a time, and offer them for second helpings. Arrange the food on the table for convenience of taking and placing on plates and trays. The dessert could be served from the kitchen as a separate course.

In this case you may have some one serving either the salad or the beverage at the end of the table opposite the meat loaf. This would mean some rearrangement of the table, which should always present a well balanced appearance. This is only a suggestion and one should think through the problem of serving the meal in order to set the table so that it will be both convenient and attractive.

Plan B, in which the trays, silver, napkins, and dessert have been omitted, represents an arrangement for service when guests are to be seated at small tables. In this case, card tables may be set up in advance with luncheon cloths, napkins, silver, water, and small centerpieces, if desired, and placed in convenient locations by the assisting hostesses while the guests are getting food from the dining room table. When there is little space it may be preferable to have the assistants set up the tables and arrange linen, silver, water, and centerpieces while the guests are getting their plates of food. If this plan is followed, all tables and materials for setting them should be arranged in a convenient place near where they will be used in order to save time and confusion in last-minute arrangements.
When either of these plans is being used, the guests may help themselves to everything around the table, beginning with trays in Plan A and with meat loaf in Plan B. It will be more friendly and hospitable if the foods at the two ends of the table are served by assisting hostesses.

After the guests have completed the first course, when Plan B is used, waitresses should remove the plates, forks, and empty milk glasses, taking them to the kitchen, scraping, and stacking them neatly near the dishwashing center. After water glasses have been filled, the dessert is brought in from the kitchen and placed in front of each guest from the left and with the left hand.

As soon as all have completed eating, the waitresses should clear the tables and quietly fold and put them away unless they are to be used later for games or other entertainment.

Rules for organization in preparation and for introductions, conversation, and table service for the dinner party are appropriate for the buffet meal as well.

When the hostess in charge announces that luncheon (or supper) is ready, she may either ask the guests to line up near the dining-room table or each assistant hostess may be responsible for taking one or more guests to the dining room. The guest may precede her hostess around the table or one of the hostesses may precede the first guest to assist with the serving and seating. In the latter case the hostess takes a tray and hands it to the guest, then takes the second tray for herself. She places the first plate of meat loaf on her guest's tray, taking the second herself and so on around the table. The other guests follow, each taking a tray and serving herself. There should, if possible, be at least one hostess at each small table.

Buffet meals may be effectively carried through according to a special theme representing a holiday, a special event, or some original idea. For example, for Mother's Day the centerpiece might consist of corsages made of spring flowers, to be given to the mothers after they have been served. Or, around a centerpiece of flowers may be placed small, attractively wrapped packages with the name of a mother on each. Each package would contain some small gift which one of the girls made especially to give to her mother on this occasion. A program of poems, stories, songs, and games featuring "Mother" would be appropriate after the meal. Why not start a collection of clippings in your food scrapbook representing suitable and clever ideas for food, table arrangement, and entertainment for buffet meals?

**FOOD RECORD**

Have you ever wondered whether your home meals are well balanced, whether they furnish the body all that it needs for health and growth? You can find out by keeping your food record and making the summary. Each member of this project is required to keep the food record for...
one week. We suggest that this be done in July so that there will be plenty of time for discussion before the club closes.

Keep a record of food served at home for seven consecutive days on page 50. Make the summary on page 51 and answer the questions under conclusions from summary (page 49).

HOW TO MAKE THE SUMMARY

One purpose of the summary is to determine the number of cups of milk and number of servings of fruit, vegetables, whole grain products and protein foods in each day's meals. Another purpose is to determine which foods in each day's menu supply vitamin A, vitamin C, calcium, phosphorus, and iron. The following explanation of the standard day should help you to record your menus on the summary sheet, page 51.

The standard-day menu used as an example on page 51 contains four cups of milk. Three cups of milk are taken as a beverage and one cup is used on the cereal, on the vegetable, and in the pudding. There are two servings of fruit: orange and apple sauce. There are three servings of vegetables: potatoes, carrots, and cabbage. The orange and cabbage slaw are served raw. There are two servings of protein: beef and navy beans.

The standard day furnishes a good supply of minerals and vitamins. Milk, cream, butter, and carrots contain vitamin A. Orange and raw cabbage contain vitamin C. Milk, orange, and beans contain calcium. Beef, beans, and whole grains contain both phosphorus and iron and potatoes contain iron. List the foods in your meals in a similar way. The table “Sources of Vitamins and Minerals in Common Foods” will be helpful.

Total the number of cups, servings or checkmarks and see how nearly you come to the standard for one week, which would be 7 times the number given for the standard day. The week's standard would be 28 cups of milk, 21 servings of vegetables, 7 checkmarks or servings of raw fruit or vegetable or tomato and 14 servings in each of the three columns labeled fruit, whole grains, and protein. It will be interesting to compare your totals for the week with this standard.

SOURCES OF VITAMINS AND MINERALS IN COMMON FOODS

<table>
<thead>
<tr>
<th>Vitamins</th>
<th>Minerals</th>
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<tr>
<td><strong>A</strong></td>
<td><strong>Calcium</strong></td>
</tr>
<tr>
<td>Liver</td>
<td>Milk</td>
</tr>
<tr>
<td>Carrots</td>
<td>Cheese</td>
</tr>
<tr>
<td>Greens (all kinds)</td>
<td>Buttermilk</td>
</tr>
<tr>
<td>Butter</td>
<td>Greens (all kinds)</td>
</tr>
<tr>
<td>Whole milk</td>
<td>Molasses</td>
</tr>
<tr>
<td>Cream</td>
<td>Cauliflower</td>
</tr>
<tr>
<td>Eggs</td>
<td>Oranges</td>
</tr>
<tr>
<td>Sweet potatoes</td>
<td>Dried beans</td>
</tr>
<tr>
<td>Halibut liver oil</td>
<td></td>
</tr>
<tr>
<td>Cod liver oil</td>
<td></td>
</tr>
<tr>
<td>vegetables</td>
<td></td>
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MEAL PLANNING AND PREPARATION

CONCLUSIONS FROM SUMMARY

The fruit and vegetable totals may be considered together since they are both good sources of vitamins and minerals. For example, if the fruit total is short several servings and the vegetable total is about the same number long they will balance each other and *vice versa*. Meat and whole grains are both good sources of phosphorus and iron, so if the protein column is short it is better to have extra servings in the whole grain column.

Do your totals indicate a shortage of certain foods? ........................................

If so, what foods? ........................................

Were vitamins A and C and calcium, phosphorus and iron represented each day? ........................................

If not, which ones were lacking? ........................................

Can you tell why they were lacking? ........................................

Was the amount of this vitamin or mineral that was lacking increased on another day? ........................................

Judging from the summary how would you describe your week of menus—excellent, good, fair or poor? ........................................

Let us remember that the “standard day” illustrates the diet standard for good health and try to keep our totals up to this standard. If some essential food is lacking one day try to supply it the next day.
SUMMARY OF RECORD FOR A WEEK

A "standard day" is one which meets the standard set by the food selection score card. The following standard day is summarized below.

Breakfast—Orange, oatmeal, milk, toast, butter, milk.
Dinner—Roast beef, baked potatoes, creamed carrots, custard pudding, milk.
Supper—Baked beans, cabbage slaw, graham bread, apple sauce, cookies, milk.

<table>
<thead>
<tr>
<th>Day</th>
<th>Milk</th>
<th>Vegetables</th>
<th>Raw fruit or vegetables or cooked tomato</th>
<th>Fruit</th>
<th>Whole grain</th>
<th>Protein *</th>
<th>Vitamin A</th>
<th>Vitamin C</th>
<th>Calcium</th>
<th>Phosphorus</th>
<th>Iron</th>
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<tr>
<td></td>
<td>4 c.</td>
<td>3</td>
<td>Y</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>Milk</td>
<td>Cabbage</td>
<td>Beans</td>
<td>Meat</td>
<td>Whole grain Potatoes</td>
</tr>
</tbody>
</table>

Totals for one week

Av. per day

* This column includes protein foods such as meats, fish, eggs, cheese, dried beans and peas.
Problem X—The Afternoon Party

HAVE you heard the expression used that some one has gone the second mile? This is the title of a poem which 4-H Club girls and also their mothers will appreciate.

THE SECOND MILE
Each life is full of dull routine,
We call it the first long mile.
But the second mile that we choose to go
Will make each life worth while.
It's the little mound of whipping cream
You pile on a plain dessert;
It's the finely 'broidered monogram
You add to your husband's shirt;
It's the ruffle on a house dress
That gives it a perky air;
It's the brilliant cover of cherry chintz
You add to a shabby chair;
It's the scarred old kitchen table
Made brave with a coat of paint;
It's the patience you bear with small mishaps
When you utter no bitter complaint;
It's the hour after the work is done
That you spend with a little boy
And a book of Stevenson's poems
That make motherhood a joy!
Necessity loses its malice,
And duty wears a smile.
May I have the strength in this fine new year
To travel the second mile.
—RUBY SWENSON McLEAN

MAKING PLANS
The amount of work required to earn the Certificate of Achievement is listed in the front of this circular. Problem X is different in this respect, because nothing in it is required. We might call this our "Second-Mile" problem and think of the different ways in which we may go the second mile. Ask Mother if you may prepare and serve the refreshments sometime when she is entertaining guests. Do not forget that she will appreciate all you can do to help have the house in good order. Your club might discuss the plans for Problem X. Some clubs may serve a dinner for the mothers as described in Problem IX, others may prefer to have an afternoon party, or tea, while others may use some of the suggestions in this problem for Achievement Day. Our mothers are continually planning for our pleasure and we cannot do too much for them. The following suggestions for a Mother-Daughter party may help us in planning other parties as well. These questions naturally arise:
When shall we have our party? Where shall we have it? How shall we invite our guests? How shall we entertain? What shall we serve?
Such questions may be discussed in the club business meeting and others may be left for the committees to decide. The following committees are usually needed: invitation, entertainment, refreshment, and room or house committee. We always want the place where the party is to be held as clean and attractive as possible, and we should leave it clean and orderly after the party is over. This is the duty of the room or house committee.

INVITATIONS
Invitations for an informal party may be given in person or over the telephone, or they may be written. The one inviting you pays you a compliment and your reply should indicate that you appreciate the invitation. "I shall be glad to come to your party," would be a suitable reply to make in case you can attend. If it is impossible for you to go, a regret should be sincerely expressed in some such way as "I am sorry that it will be impossible for me to attend your party." Correspondence cards may be used for invitations. Figure 6 is a folded and unfolded view of a simple invitation. After folding, the point may be sealed with the clover emblem.

A written invitation should be accepted or declined, at once, by a note written in the same style. A suitable reply would be:

Dear Mrs. Smith:
On Wednesday afternoon, August fifth, members of the Jolly Cooking Club plan to have a party in honor of their mothers at the Community Hall.
We hope that each mother will be present at two o'clock.
Sincerely yours,
Mary Jones, Sec.
3144 Ellis Ave.

A written invitation should be accepted or declined, at once, by a note written in the same style. A suitable reply would be:
Dear Mary:

Thank you for the cordial invitation for Wednesday afternoon. I shall be very glad to go to your party.

Sincerely yours,

Mrs. R. L. Smith

A written invitation gives the one receiving it more time to decide whether it can be accepted. Invitations should be written by hand, and in ink.

INTRODUCTIONS

Some member of the entertainment committee should be at the door to welcome the guests. It often happens that some of the guests at a party have not met one another. Care should be taken that all of the guests are introduced to one another and to each club member. Have Mother show you how she receives and introduces her guests. Watch for courteous ways of doing it. At a previous meeting club members may practice receiving and introducing guests by having part of the members play they are guests.

The following suggestions may be helpful for this practice: When you arrive at the party, the one giving the party, that is, the hostess, usually says that she is glad to see you and shakes hands. You, in turn, would say that you are glad to be at the party or in some such way express your pleasure. You will, of course, greet others as you enter the room where the guests are assembling. When introducing one person to another, it makes a difference whether you say, “Mrs. Smith, I want you to meet Mary Jones,” or “Mary, I want you to meet Mrs. Smith.” Mrs. Smith is the older person, and Mary should be introduced or presented to her. In this case the first one is correct. When introducing a girl friend to your Mother, you may say, “Mother, this is Martha Williams.” It is nice to add some remark after the introduction so that the people being introduced will know more about each other. For example, you might say, “I have often spoken of Martha, we are in the same classes at school.” Present everyone to your mother regardless of rank. If your mother’s name is different from your name then mention her name, as, “Miss Williams, I want to present you to my mother, Mrs. Martin.”

GENERAL RULES FOR INTRODUCTIONS

Present a younger person to an older person. Present a boy to a girl or a man to a woman. Present a less prominent person to one of greater importance.

The generally accepted form of acknowledging introductions is “How do you do?” It is not necessary, but it is a courtesy to repeat the name of the person to whom you are being introduced. “I am glad to meet you,” is a cordial acknowledgment but is reserved for rare occasions when you feel sure the meeting is a pleasure to both persons. The person being introduced follows the lead of the one to whom she is introduced. If a bow has been made, the bow should be returned. If a hand is extended, the hand should be grasped.

REFRESHMENTS

The hostess or the one doing the introducing rises to greet any guest. A boy or a man rises when introduced to a girl or woman. A girl or woman rises to greet or be introduced to her hostess, to an older woman, or to a much older man.

ENTERTAINMENT

A person giving a party plans to have the guests enjoy themselves. It is courteous for the guests to help the hostess in every way possible. If group songs are sung or games are played, enter into the spirit of them heartily. In fact, do your part to make the party a success. Put yourself in the place of the hostess and think how you would feel if some guest took no interest in the entertainment. Getting acquainted games are suitable for the beginning of a party and may be started as soon as there are enough guests to make them interesting.

Your mothers will enjoy the 4-H Club songs, “Dreaming,” “Plowing,” and “A Song of Health.” These have been used as memory songs by the women’s project clubs as well as by 4-H clubs in Nebraska, so perhaps some of the mothers will know them and sing with you. Ask them to suggest some songs that all can sing.

Demonstrations have proved to be interesting features of club programs. These may be individual or team demonstrations, or a business meeting demonstration put on by the club. Whatever is demonstrated should be well practiced beforehand so that the club may be proud of the way it is given. Remember that “practice makes perfect” and we want our mothers to be able to say, “They learn to do things so well in 4-H club work, I am glad that my girl joined.” Following the standards discussed in “Hows and Whys” will help to make our demonstrations successful. What standards for improving our work would you add to this list after your experience in both cooking club projects? A judging demonstration would be interesting to the mothers. This might be carried out by having one of the members place a class of bread or cake and give her reasons for the placing. As a rule a one-hour program is long enough. After planning the program, practice and record the time so you will know how long it takes.

The index to Cooking Club recipes is found at the end of each circular. This will make it convenient for the refreshment committee to find recipes when it plans the refreshments. A few other suggestions and recipes follow:
FRUIT CUP

4 slices canned pineapple  
or 1 cup fresh pineapple  
2 oranges  
½ c. sugar

Cut pineapple in small pieces. Dice oranges and grapefruit as suggested in Problem 1. Mix the fruit and sugar and keep in a cool place. When ready for serving, place in sherbet glasses.

Variation.—Many different combinations of fresh and canned fruits may be used. A fresh strawberry or blackberry placed on top is a pleasing garnish. Tinted pineapple pieces and when ready to serve place a piece on top of each serving.

GRAHAM CREAMS

Spread uncooked frosting between graham crackers and put in a cool place to stiffen. Small rectangular graham crackers are a neater shape for serving and more easily handled than the large square ones. If peanut flavor is desired, mix a small amount of peanut butter with the powdered sugar before adding milk. Add just enough milk so the frosting will spread but not run.

ICE BOX COOKIES

½ c. fat  
1 c. brown sugar  
1 egg  
½ t. vanilla

Cream the fat and sugar. Add well beaten egg and vanilla. Combine with fat and sugar. Into this mixture stir the dry ingredients which have been sifted together. This mixture is so stiff it is hard to stir when all of the dry ingredients have been added. Shape into two rolls, wrap in wax paper and let stand over night in a cool place. Slice ¼ inch thick and bake in a moderate oven 12 to 15 minutes.

Variation.—½ c. chopped nuts, dates, or raisins may be added.

OPEN-FACED SANDWICHES

Spread thin slices of bread with softened butter and highly seasoned filling. Various fillings may be used to bring color and design into the menu. Garnish with tiny slices of tomato, jelly, sliced olives, pimiento, nuts or candied cherries.

Cheese.—Moisten cream cheese or grated American cheese with cream or mayonnaise to a spreading consistency. Garnish with paprika or finely minced parsley.

Egg.—Chop or mash whites of hard cooked eggs and season with salt and pepper. Moisten with cream or salad dressing. Run egg yolk through a sieve and use as a garnish.

Coconut.—Spread whole wheat or graham bread with butter which has been creamed with brown sugar. Sprinkle with coconut.

SPICED GRAPE JUICE

1 qt. grape juice  
2 short pieces stick cinnamon  
¼ c. sugar  
6 whole cloves

Heat all together in a double boiler or over a slow fire. Do not boil. Strain out spices. Serve hot in sherbet or tea cups with a whole clove on top of each cup.

HOT RUSSIAN TEA

¼ c. sugar  
2 lemons, juice  
1 orange, juice  
½ t. cream of tartar  
½ t. soda  
1 grapefruit  
2 c. flour  
½ t. cream of tartar  
½ t. soda  
1 qt. water  
1 or 2 small sticks cinnamon  
6 whole cloves  
3 t. tea (Black or Orange Pekoe)  
1 lemon and orange rind

Add spices to water and heat to boiling. Add tea and let steep for five minutes or less according to the strength desired. Add sugar and stir until dissolved. Add fruit juice and rind. Serve hot but do not boil. Remove spices when the desired strength is obtained. Tie spices in cheese cloth bag when preparing tea in large quantity.

COURTESY TO OTHERS

If courtesy is shown to those with whom we associate each day it will become easy and natural. Younger folks rise when older persons enter the room. We should make certain that they have a comfortable chair and think of other things which might add to their comfort. Older people enjoy talking with younger ones and respect is shown by seeing that the conversation is on a subject in which everyone may take part.

It would be unfortunate if your party should be a stiff formal one that is not enjoyed. How can this be prevented? Aside from the general plan which the club makes for entertaining, each girl should do her part to carry on a conversation with the guests. It would be discourteous for a group of girls to get together and have a good time while guests were sitting there unentertained. Do your best to make every guest have a happy time.

When leaving a party it is courteous for the guest to shake hands with the hostess and besides saying goodbye tell her you enjoyed the party or thank her for the good time. The way we say it counts more than what we say. Do you think a hostess can tell whether or not we really mean what we say?

Close the party promptly so that the refreshment and house committee will have time to finish its work in good shape. If the community hall is left in disorder do you think the ones in charge of it will want 4-H club members to use it again? Would it be courteous to leave the “finish-up” for your leader to do?

THE TEA

Teas are similar to buffet meals but simpler in that different types of food are served and they are usually given in the latter part of the afternoon. They should be friendly affairs whether they are simple or elaborate and for a few friends or for many guests.

The tea table should be arranged similarly to that for buffet service. Teas may be served in the dining room, living room, or on the porch. Guests may be invited to the table to be served and help themselves to accompaniments or waitresses may carry served plates to the guests. In the latter case accompaniments are offered to guests by waitresses. Details of the plan for arranging the table and serving the tea must be very carefully thought through.

A variety of foods are appropriate for teas. When entertaining adults tea or coffee may be served. Hot or cold fruit drinks or chocolate are
often served instead of tea. Simple but attractive small sandwiches, dainty cookies or cakes and sometimes nuts or candies complete the menu. Occasionally a frozen dessert is substituted for the beverage and bread. Following are some suggested combinations for afternoon tea:

- Assorted Open-Face Sandwiches—Russian Tea
- Date Bars—Hot Spiced Grape Juice
- Nut Bread Sandwiches—Coffee—Mints
- Cinnamon Toast—French Chocolate
- Assorted Cookies—Cocoa
- Lime Sherbet—Iced Cakes—Salted Nuts—Assorted Mint Wafers

Acknowledgment

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