1933

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 Cooperating
W. H. Brokaw, Director, Lincoln
CLUB MOTTO
To Make the Best Better

CLUB COLORS
Green and White

CLUB EMBLEM
The four-leaf clover with an H on each leaf

CLUB PLEDGE
I Pledge
My Head to clearer thinking
My Heart to greater loyalty
My Hands to larger service
and
My Health to better living
for
My club, my community, my country.

---

Meal Planning and Preparation

By JESSIE G. GREENE

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.

—Rispah Geff Howell

Health, Happiness, and Success go hand-in-hand. After learning some of the “Hows” and “Whys” of cooking in our 4-H club, “Meal Planning and Preparation” will be all the more interesting.

REQUIREMENTS

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 calendar for one week.
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 page 9</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>
FOOD SELECTION SCORE CARD

<table>
<thead>
<tr>
<th></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></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</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potatoes may be included as one of the above servings. If a leafy vegetable is included as (greens, cabbage, celery, lettuce), 5</td>
<td></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</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If raw fruit or vegetable or canned tomato is included, 5</td>
<td></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></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></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 serving of any two of above, 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WATER (total liquid)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 quart, 5; 1½ quarts, 10</td>
<td></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 Deductions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL SCORE</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Let us each check ourselves by the “Signs of Good Health” found in problem I of “Hows and Whys for Young Cooks”. Do I come nearer reaching the standard set by these signs than last year? 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 leafy vegetable as greens, cabbage, celery, or lettuce.

The estimated size of each serving of cooked vegetable is one-half cup, so 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 also found in problem I. If possible look up the food value of vegetables in some good text book.

MEAL PLANNING AND PREPARATION

Problem VI

VEGETABLES—SCALLOPED DISHES—CHEESE

WHY DO WE EAT VEGETABLES?

1. Vegetables are laxative due chiefly to the cellulose or woody fiber which they contain.
2. Vegetables are good sources of the minerals most often lacking in our diet. Beans, peas, and greens supply iron and calcium.
3. Vegetables are important sources of vitamins. Vitamin A is abundant in carrots and green leafy vegetables. Vitamin B appears in nearly all vegetables. The best sources for Vitamin C are raw cabbage, tomatoes, and green peppers. Vitamin C is destroyed by continued cooking. However, cooked tomatoes are a good source of Vitamin C because the acid they contain preserves this vitamin.
4. Vegetables are not considered high in energy value; however, potatoes, dried beans, and peas are exceptions.

LEARNING TO EAT VEGETABLES

Most young people like potatoes and tomatoes, but how about spinach, carrots, onions, asparagus, cauliflower, and many other vegetables? Some do not like certain vegetables and it is often 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. A three-year old may learn to like all vegetables good for children. Mothers have found that by mixing vegetables, as carrots or peas, with potatoes the child learns to like the new flavor. The amount combined with the potato may be small at first and gradually increased. How can we help our younger brothers and sisters to eat more vegetables? Stories always appeal to children and they enjoy hearing them over and over. A boy of five eats more vegetables since hearing the story of “The Little Vegetable Men” in a book entitled “Cho Cho and the Health Fairy.” He wants to be strong and healthy like the children who have good food and health habits. How about the example set by older brothers and sisters? Do you think it helps if they always eat vegetables which are served? These rules for learning to eat vegetables should help older people as well as boys and girls to learn to like them.

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.

Second—Combine vegetables with foods which you like. Most people like the flavor of meat, so 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. 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. It takes careful planning to provide a variety of vegetables and fruits for a family throughout the year, but it is worth the effort. Club members should learn to prepare vegetables in various ways so 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, 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 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 wise 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 produce.

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, 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”.

**Preserving Color**

1. **Green vegetables.**—Chlorophyll, the green coloring matter, is destroyed by heat and acids. Both chlorophyll and acid are set free by heat and if the acid is not neutralized it destroys the chlorophyll. Sometimes the water we use is slightly alkaline, that is, it contains a substance which neutralizes or counteracts the effect of the acid. Thus, boiling the vegetable in a large amount of water helps to preserve the green color because it dilutes the acid and may even neutralize it. Spinach and other tender greens cook so quickly that the heat and acid do not have time to change the color.

Green beans and other vegetables requiring one-half hour or more lose their color unless the cooking water is kept slightly alkaline; even this will not preserve the color if the time of cooking is prolonged for an hour. Thus, to preserve the color when cooking green vegetables, drop them into rapidly boiling water and cook for the shortest possible time. The reason for leaving the kettle uncovered is to allow the volatile acids to pass off in the steam. Use more water than is required to cook them unless like spinach they can be cooked in a few minutes. As a rule, green vegetables cannot be cooked in a steamer or a pressure cooker without loss of color.

2. **Yellow vegetables** can be cooked in a small amount of water, in a steamer, or in a pressure cooker without damaging their color.
3. Red vegetables. — The presence of acid helps to retain the red color. Red cabbage for example, does not stay red during the cooking unless we add acid in the form of vinegar, lemon juice or tart apples. Without added acid, the color turns purple or blue in neutral cooking-water and green in alkaline waters. The blue color will go back to the original red, however, upon the addition of a little acid. In cooking beets we find that the acidity of their own juice is enough to keep the color. Therefore if we do not pare or cut beets we can cook them in any kind of water without adding extra acid and still have the color good. Beets may be steamed or cooked in a pressure cooker without loss of color and by such means preserve flavor and nutrients as well.

4. White vegetables darken when over-cooked so to avoid this, cook them only until tender. Vegetables belonging to the cabbage family also develop a strong taste and odor. To avoid this cook them in a large amount of water and in an uncovered kettle for the shortest possible time. Onions lose flavor while cooking and on long cooking may be flat and insipid. If strong, they should be boiled rather than cooked in a steamer or pressure cooker because some flavor will be lost in the water.

Preserving Flavor. — Considering flavor, all vegetables except those of the cabbage family and onions are best cooked in a small amount of water; in the steamer, or if they require long cooking, in a pressure cooker.

Preserving Nutrients. — Let us consider the three methods of cooking in relation to the loss of nutrients. The loss is about twice as great in boiling as it is in steaming vegetables, and there is practically no loss in baking. Losses in boiling vary with the proportion and reaction of the cooking water, the time of cooking, and the area of cut surface exposed to the water. Because boiling removes such a large percentage of nutrients the cooking 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 THE 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 using 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, potatoes; sweet and Irish, squash, wax beans, parsnips, and beets.

Boiling. — 1. 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.

2. Boil, uncovered, in a large amount of water for the shortest possible time. There should be more water than is required to cook them unless, like spinach, they can be cooked in a very short time.

3. 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 nutrients are lost if carrots, parsnips, and sweet potatoes are cut lengthwise rather than crosswise.

4. 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 can be used in any meat, egg, or vegetable dish where water or milk is used (such as omelets, scrambled eggs, meat loaf, hash, meat pie, stews, mashed potatoes, soups, and gravies.)

5. Vitamins B and C are destroyed rapidly in the presence of alkali water or milk is used (such as omelets, scrambled eggs, meat loaf, hash, meat pie, stews, mashed potatoes, soups, and gravies.)

6. 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 thoroly. Scratch with a brush if necessary.

String beans. Cook whole or in 2-inch pieces 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. Wash and inspect for insects. If wilted let it stand in cold water until crisp. Shred, slice, or cut in wedge-shaped pieces.

Cauliflower. Remove leaves, wash, and break into flowerets before cooking.

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

Celery. Cut open around the stem or in halves and remove the strings.

Egg plant. 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 rather than pour water off of them.

Lettuce. To wash head lettuce, cut off stem end and cut stem out of head for about three-fourths inch to 1 inch deep. Let water run into the hole, invert and drain. Repeat the process 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 thoroly 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.
## Extension Circular 9-03-2

### 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 8-10,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>butts 20-25</td>
</tr>
<tr>
<td>Beans, green</td>
<td>Whole</td>
<td>30-35</td>
</tr>
<tr>
<td>Beets, young</td>
<td>Whole</td>
<td>40-55</td>
</tr>
<tr>
<td>Brussels Sprouts</td>
<td>Partially split or whole</td>
<td>9-10</td>
</tr>
<tr>
<td>Cabbage, green</td>
<td>Shredded</td>
<td>6-8</td>
</tr>
<tr>
<td>Cabbage, white</td>
<td>Shredded</td>
<td>8-9</td>
</tr>
<tr>
<td>Cabbage, red</td>
<td>Shredded</td>
<td>20-25</td>
</tr>
<tr>
<td>Carrots</td>
<td>Cut in halves or thirds length-wise</td>
<td>Young 20-25;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>old 30-40</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>20-25</td>
</tr>
<tr>
<td>Parsnips</td>
<td>Cut crosswise in 2 pieces and</td>
<td>25-30</td>
</tr>
<tr>
<td></td>
<td>lengthwise in halves or thirds</td>
<td></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</td>
<td>15-25</td>
</tr>
<tr>
<td></td>
<td>in halves</td>
<td>25-30</td>
</tr>
<tr>
<td>Rutabagas</td>
<td>Cut lengthwise in (\frac{1}{2}) in. slices</td>
<td>4-5</td>
</tr>
<tr>
<td>Spinach</td>
<td>Stems removed</td>
<td>8-10</td>
</tr>
<tr>
<td>Squash (Hubbard)</td>
<td>Pared and cut into pieces 2 by</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>1 inches</td>
<td></td>
</tr>
<tr>
<td>Turnips, White</td>
<td>Pared and cut in (\frac{1}{4}) in. cubes</td>
<td>20-25</td>
</tr>
</tbody>
</table>

The amount of vegetables used for cooking when the above time-table 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 over-cook 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 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, as rapid boiling causes the vegetable to slough off or lose shape.

### Variations of Boiled Vegetables

**Buttered or mashed.**—Use about 2 T. butter and \(\frac{1}{4}\) 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 \(\frac{1}{2}\) 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.

## Meal Planning and Preparation

### Creamed Vegetables

Steam 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. Steam vegetables 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 are 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 problem II. 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 \(\frac{3}{4}\) 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, so fresh crisp vegetables 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.

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 thru 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 butchers' apron is suitable for this rough work and saves our better aprons. If you do not have an apron of this kind at home perhaps mother will let you make one which may be used by several members of the family.

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. This is an opportunity for club members to help mother a great deal.

BAKED POTATOES

Select medium-sized potatoes with smooth skins. 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 teaspoon 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 a 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 ¼ 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, for scalloped dishes. 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 1 T. for soft crumbs. Melt butter, add the crumbs, then stir and mash them until they have absorbed or, if needed. Repeat the layers, cover with buttered crumbs and brown in oven.

Creamed au gratin or scalloped au gratin. —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 ¼ 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 % t. 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 baking 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 ¼ c. ground bacon
2 c. fresh or canned tomato ¼ c. chopped onion
½ t. salt 1 c. buttered dry bread crumbs

Pare 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 for 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>Vitamin</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</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 overcooked either by long cooking or high temperatures. This is the reason we protect cheese from oven heat with bread crumbs. Over-cooked 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 Whys For Young Cooks" problem II.

**ENGLISH MONKEY**

1 c. milk ¼ t. salt ½ c. grated cheese
1 T. butter dash paprika 1 egg
1 c. soft bread crumbs dash mustard

Heat milk in double boiler, add butter, bread crumbs, and seasonings. Add grated cheese and stir until smooth. Pour mixture over beaten egg. Return to double boiler and stir until egg thickens. Serve on toast.

**Variation.**—Season with 1 small chopped onion and serve on whole wheat toast—called Cheese Fondue.

**MACARONI AND CHEESE**

2 c. cooked macaroni ¼ t. salt
¼ c. finely chopped cheese ¼ c. milk
½ t. pepper 1 c. buttered crumbs

Boil macaroni in a large amount of water as you did rice in "Hows and Whys For Young Cooks" problem III. Macaroni swells when cooking. Measure it before and after cooking so next time 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.

**CHEESE SOUFFLE**

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

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

DESSERTS

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 rich desserts are 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.

Club girls learned to make custards and milk-puddings in their study of problem II. Let us review some of the things we learned about these 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 over-cook 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 albumin at a temperature of 160° F.-180° F. Higher temperatures toughen egg albumin. When we realize that boiling temperature is 212° F., we understand why egg dishes are easily over-cooked. 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 so do not have this effect.

In this problem we will consider only simple desserts, reserving cakes and pastry for another problem. Fruit recipes given in "Hows And Whys For Young Cooks" problem I, and puddings in problem II will not be repeated.

BAKED PEARS OR APPLES

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

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 pan 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.

SNOW PUDDING

1 T. granulated gelatin 1 c. sugar
⅔ c. cold water (to soak gelatin) ¼ c. lemon juice
⅔ c. boiling water 2 T. orange juice
⅔ c. cold water 2 egg whites

Follow the general rules for gelatin and when the mixture begins to stiffen beat until foamy. Fold in the beaten whites or whipped cream. Place a stoned date on each half fruit. Peaches may be peeled and baked whole or cut in halves.

FRUIT SOUFFLE

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

Use any kind of fruit either fresh or preserves. When canned fruit is used, drain off the sirup. Rub the fruit pulp thru 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

1. Soak granulated gelatin in cold water or milk 5 to 10 minutes.
2. Dissolve in hot liquid or over hot water.
3. Add sugar and stir until dissolved.
4. Add fruit juice, strain if a clear jelly is desired and cool.
5. Rinse mold with cold water. Do not dry. Pour in mixture.
6. Place in a cool place or refrigerator and leave until ready to serve.
7. If a foamy gelatin is desired, allow mixture to partially stiffen, then heat thoroly.
8. When egg whites or whipped cream are to be added, allow gelatin mixture to partially stiffen, heat 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.
9. 1 T. gelatin will stiffen 1 pt. of liquid.
10. If pineapple is added to gelatin it must be cooked or canned because fresh pineapple thins the gelatin.

When a commercial gelatin dessert is used follow the directions on the package.
**PRUNE SHORT CAKE WITH PRUNE SAUCE**

- 2 c. flour
- 1 T. S.A.S. baking powder
- 2% c. milk (scant)
- ½ c. sugar
- ½ t. salt

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 dried 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 ½ inch thick and place on top of fruit. Bake in a hot oven.

**COOKED PULP COTTAGE PUDDING**

1 c. prune juice
1% T. flour or 1 T. cornstarch
1% t. vanilla

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

**VANILLA SAUCE**

1 c. boiling water
1% t. flour or 1 T. cornstarch
½ c. sugar
1 T. cold water

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
1 T. cold water
½ T. sugar

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 luke warm (110° F.), and is hot, stirring constantly. Remove from stove. Add the dissolved junket to the luke warm 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.

**FROZEN DESSERTS**

Water ices are frozen beverages while ice creams are more nutritious and rich. Ice creams are highly concentrated foods. 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 may destroy the grass, leaving an unsightly spot.

**DIRECTIONS FOR FREEZING AND PACKING**

1. Crush ice by placing it in a sack and pounding it with a mallet or broad side of an ax.
2. Use eight parts of ice to 1 part of rock salt. Mix only enough for immediate use because salt hastens the melting of ice.
3. Prepare freezer container by scalding and cooling. Pour ice mixture to be frozen, never filling the can more than three-fourths full, as liquids expand in freezing. Put in place, adjust cover and handle to see if it turns freely.
4. 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 and is 1 or 2 inches below the top of the ice cream container.
5. Turn crank slowly and evenly, adding ice as needed.
6. When mixture is frozen, draw off the salt water; clean 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.
7. Cover with papers or a heavy cloth. Let stand about 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.

**AMOUNTS FOR FROZEN MIXTURES**

One quart of frozen mixture makes from 6 to 8 servings. About 3 cups of liquid will make 1 quart of frozen mixture.

**LEMON ICE**

\[
\begin{align*}
\text{1 1/2 c. water} & \quad 5/4 \text{ c. lemon juice (3 lemons)} \\
\text{1 1/2 c. sugar} & \quad \\
\end{align*}
\]

Make a sirup by boiling water and sugar. Add lemon juice, strain, cool and freeze.

**VANILLA ICE CREAM**

\[
\begin{align*}
2 \text{ c. thin cream} & \quad 5/4 \text{ c. sugar} \\
2 \text{ t. vanilla} & \quad \\
\end{align*}
\]

Mix ingredients and freeze.

**CUSTARD VARIATION**

\[
\begin{align*}
1 1/2 \text{ c. milk} & \quad 5/4 \text{ c. sugar} \\
2 \text{ egg yolks, slightly beaten} & \quad 2 \text{ t. vanilla} \\
\end{align*}
\]

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

**LEMON-MILK SHERBET**

\[
\begin{align*}
1 \text{ pt. milk} & \quad \text{Juice of 1 lemon} \\
5/4 \text{ c. sugar} & \quad \\
\end{align*}
\]

Dissolve sugar in milk and freeze to mush. Add lemon juice and finish freezing.

**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 many of us have younger brothers and sisters, so 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, 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 suggested in problem V. In this problem each club member planned, prepared, and served a breakfast. The various steps were discussed and illustrated. Review them carefully.

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. Let us use the breakfast menu in problem V and work out a dinner and supper to go with it. 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 as we will plan to have fruit for dinner and supper. Rolled oats was used for the cooked cereal and this counts as one serving of whole grain products, so 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 it will make one serving from each of two protein foods.

---

**MEAL PLANNING AND PREPARATION**

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 so we will include three servings of vegetables, one of which is a leafy vegetable.

Does the following day's menu 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.

---

**COST OF FOOD FOR THE DAY**

<table>
<thead>
<tr>
<th>Food Items</th>
<th>Price Per Unit</th>
<th>Amount Used</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomato juice</td>
<td>$0.50 per No. 10 can</td>
<td>1 qt.</td>
<td>$0.15</td>
</tr>
<tr>
<td>Rolled Oats</td>
<td>$0.10 per pkg. (20 oz.)</td>
<td>1/2 pkg.</td>
<td>$0.05</td>
</tr>
<tr>
<td>Cream</td>
<td>$.09 per 1/2 pt.</td>
<td>$0.09</td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>.09 per qt.</td>
<td>3 1/2 qts.</td>
<td>$0.32</td>
</tr>
<tr>
<td>Eggs</td>
<td>.20 per dozen</td>
<td>10 eggs</td>
<td>$0.17</td>
</tr>
<tr>
<td>Beef (rib)</td>
<td>.11 per lb.</td>
<td>3 lbs.</td>
<td>$0.33</td>
</tr>
<tr>
<td>Potatoes</td>
<td>1.28 per bushel</td>
<td>1/4 pk.</td>
<td>$0.16</td>
</tr>
<tr>
<td>Carrots</td>
<td>.03 per lb.</td>
<td>1 1/2 lbs.</td>
<td>$0.05</td>
</tr>
<tr>
<td>Pickles</td>
<td>.25 per qt.</td>
<td>1/2 qt.</td>
<td>$0.05</td>
</tr>
<tr>
<td>Bread</td>
<td>.10 per loaf</td>
<td>1 loaf</td>
<td>$0.10</td>
</tr>
<tr>
<td>Butter</td>
<td>$.28 per lb.</td>
<td>1/2 lb.</td>
<td>$0.14</td>
</tr>
<tr>
<td>Prunes</td>
<td>.14 per lb.</td>
<td>1/2 lb.</td>
<td>$0.07</td>
</tr>
<tr>
<td>Macaroni</td>
<td>.08 per pkg.</td>
<td>1/2 pkg.</td>
<td>$0.04</td>
</tr>
<tr>
<td>Cheese</td>
<td>.20 per lb.</td>
<td>1/4 lb.</td>
<td>$0.05</td>
</tr>
<tr>
<td>Cabbage</td>
<td>.04 per lb.</td>
<td>1 lb.</td>
<td>$0.04</td>
</tr>
<tr>
<td>Peaches</td>
<td>.10 per No. 10 can</td>
<td>1 1/2 pts.</td>
<td>$0.15</td>
</tr>
<tr>
<td>Cookies</td>
<td>.10 per dozen</td>
<td>1 dozen</td>
<td>$0.10</td>
</tr>
<tr>
<td>Sugar for cereal</td>
<td>.05 per lb.</td>
<td>6 oz.</td>
<td>$.01</td>
</tr>
<tr>
<td>Muffins and dessert</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salad dressing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry ingredients for muffins</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total cost for the family for this day $2.10.
Total cost per person for this day $0.42.
The prices listed in this table were Lincoln 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.

Several slices of fried bacon left the previous day were used in the muffins. This is not included in the table of cost because it will balance the small amount of beef which is probably left from dinner.

PLAN OF WORK

The plan of work for breakfast is given in problem V so will not be repeated here. The dinner and supper plan for this day follow:

Time

9:00 a.m. Make cookies.
9:30 Finish baking cookies.
10:00 Prepare meat and place in oven.
Make prune whip and custard sauce. Use left-over stewed prunes.
10:30 Prepare dinner vegetables. At the same time wash cabbage for supper, wrap in wet cheese cloth, and put in cool place.
11:00 Place vegetables in roaster.
11:30 Place pickles, bread, and butter. Pour water or milk.
11:45 Lay the table. Dessert may be placed on table or on service cart.
11:55 Shred cabbage. Dressing was made the day before.
5:00 Prepare macaroni and cheese and place in oven.
5:40 Place pickles, bread, butter, water, milk, and the hot food just before the family is seated.
6:30 Clear table, wash, wipe, and put away dishes.

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 all 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. During mother's vacation will be an excellent time for having to the service cart. Place bread, butter, water, milk, and the hot food just before the family is seated. Dessert may be placed on the service cart. Place bread, butter, water, milk, and the hot food just before the family is seated.

1. 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?
2. Introduction of air. Air is introduced by beating the batter and by using beaten eggs. Air inclosed in the mixture expands when heated.
3. Formation of steam. As the water in any product is heated it expands and is changed into steam, making the product lighter.
SOME THINGS TO REMEMBER

1. Read the recipe and place it where it is convenient.
2. Get all utensils and materials needed. Remove fats, milk, and eggs from refrigerator early to enable them to become room temperature, as ingredients blend more readily at about 75° F. (or room temperature). Have everything ready before you begin to mix the cake, for it may not be so good if you stop beating it to get some ingredient.
3. See that the oven is hot by the time you are ready for it.
4. Sift flour before measuring. After sifting, fill cup by lightly piling the flour into it with a large spoon. Never dip the cup into flour or shake the flour down into the cup because it destroys the effect of the sifting.
5. Vary the amount of baking powder according to type. Read the label on cans to determine which type you are using at home. See discussion of Baking Powders in problem III.

Conventional Method

1. Fit a piece of oiled or other thin paper into the bottom of the pan. Oil the paper and sides of pan.
2. Measure the ingredients.
   a. Sift the flour, baking powder, and salt together.
   b. Place fat in the mixing bowl.
   c. Add the vanilla to the milk.
3. Combine the fat, sugar and egg yolk, as follows:
   a. Cream the fat with a wooden spoon until it resembles thick, smooth cream.
   b. Add about 1 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.
   c. Separate the egg whites from the yolks; place the yolks in the fat-sugar mixture and beat until they are thoroly combined.
   d. 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.
4. Combine the remaining ingredients as follows:
   a. Add 1 heaping tablespoon of the flour mixture to the fat-sugar-egg mixture. Stir until the flour is dampened, then beat until combined.
   b. Add about 2 T. of the milk, with a few gentle strokes mix it slightly with the other ingredients.
   c. Repeat this addition of flour and milk ending with a portion of flour. When adding flour and milk alternately, it is important to remember that flour is added first and last.
5. Stir in beaten egg whites, stirring gently until the mixture can be divided without spattering, then beat until the egg white is thoroughly combined. Why do we stir in the egg whites when mixing a butter cake and carefully fold them in when making an omelet, a soufflé or a sponge cake? Here is the answer. Butter cakes contain baking powder which gives off gas for a short time after it is mixed with liquid. Stirring requires a shorter time than folding so by stirring in the egg white we lose less of the gas produced by the baking powder.
6. Immediately turn the batter into the oiled tins.

Variations of the Conventional Method

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.
2. Add the unseparated eggs beaten or unbeaten to the fat-sugar mixture.

Other Methods

1. Muffin method—mix the same as for muffins.
2. Quick or cake mixer method—soften fat, measure all ingredients, and mix in a cake mixer or bowl.

Which Method Shall I Use?

It depends upon the time you have to make a cake, 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 coarse muffin 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 if the batter has been carefully prepared, the cake may be a failure if it is not baked properly. Review suggestions for baking quickbreads, "Hows And Whys For Young Cooks" problem III, they will also be helpful for cakes. If you do not have an oven thermometer continue using the flour test.

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 becomes 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. This may be overcome somewhat by turning the cake very carefully. Cakes containing molasses burn easily, so to avoid burning, lower the temperature. A hot oven makes sponge cake tough and leathery because they 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.

**TIME AND TEMPERATURE FOR BAKING CAKES**

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

1 1/2 c. fat
1 c. sugar
2 eggs
1/2 c. milk
1/4 t. salt
1/4 t. flavoring

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. 1/2 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 (1/2 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 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.

Immediately turn the batter into the oiled tins.

**Variations**

1. White. Use 4 egg whites instead of 2 eggs. Use 1 t. flavoring instead of 1/2 t.

2. Gold. Use 4 egg yolks instead of 2 eggs.
3. Chocolate. Add 2 or more squares of melted chocolate (depending on taste) to the fat-sugar mixture.
5. Spice. Add 1 t. cinnamon, 1/2 t. nutmeg, and 1/2 t. cloves. Other spices such as allspice, mace or ginger may be used. Brown sugar may be substituted for all or part of the sugar. Pack brown sugar into cup when measuring.
6. 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 1/2 c. fat instead of 1/2 c.
   B. Use 1/2 c. fat, 1 1/2 c. sugar, 3 eggs, instead of 1/2 c. fat, 1 c. sugar, 2 eggs.
7. Cup Cakes. Any of these cakes may be baked in muffin tins.

**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**

1 or 2 T. butter
1 T. milk or 1 egg white unbeaten
About 1 c. confectioner’s sugar
Few grains of salt
1/2 t. vanilla

Cream the butter until soft, add about 1/2 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 stiff, add a few drops of liquid.

**Variations**

1. Orange frosting—Use orange juice for liquid, add 1 or 2 t. grated orange rind. About 1/2 of an egg yolk may be added to color this amount.
2. Cream frosting—Use cream for liquid, increasing the amount by 1/2. Omit sugar.
3. Cocoa frosting—Use 1 T. cocoa, mixed with the sugar.

**7-MINUTE FROSTING**

2 T. cold water
1 egg white, unbeaten
1/4 t. cream of tartar
3/4 c. granulated sugar
Few grains salt
1/2 t. vanilla

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 will 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 whites 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 throughout 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
- 3 T. boiling water
- ½ t. salt
- ½ t. cream of tartar
- ½ t. vanilla
- 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 the 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 egg-whip or rotary beater until they are stiff but not until they lose their shiny appearance.

Beat the yolksugar-water mixture until it is very stiff.

Add about 1/6 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.

Add the beaten egg whites and vanilla. Using the wire whip, fold until the whites have disappeared; then continue folding for 2 minutes. 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 325° F. for about 1 hour. Use the same test as for sponge cake.

**MEAL PLANNING AND PREPARATION**

![Fig. 2.—Team Demonstrating Making of Angel Food Cake.](image)

**ANGEL FOOD CAKE**

- 1 c. cake flour or ¾ c. general
- 1 c. egg whites (about 8 medium eggs)
- 1½ c. fine granulated sugar
- ½ t. salt
- ½ t. cream of tartar
- ½ t. vanilla

Do not oil the baking pan.

Sift and measure the flour.

Sift and measure the sugar, then mix half of it with the flour. Beat the whites with an egg-whip or double rotary egg-beater until they are stiff enough to hold their shape but not until they lose their shiny appearance.

Sift a thin layer of sugar over the whites, then fold it into the whites.

Repeat this folding process for the rest of the sugar; then for the sugar and flour mixture, sifting only about 2 T. at one time over the whites.

After the last portion of flour-sugar mixture is combined with the egg whites, add the vanilla and continue folding gently for 2 minutes longer.

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 325° F. for about 1 hour. Use the same test as for sponge cake.

**SCORE CARD FOR CAKES**

1. General Appearance
   - Size—right in proportion to amount of batter.
   - Shape—uniform with only slightly rounding top.
   - Crust—Color—an even golden brown. Varies with kind.
   - Sponge cake slightly lighter in color than butter cake.
   - Quality—tender, thin, crisp, smooth.

2. Lightness—suitable relation of weight to size
30 Crumb

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 floral used to excess.

Taste, agreeable.
Odor, delicate.

SCORE CARD FOR ICING

1. General appearance—smooth and glossy...20
2. Texture—soft (not brittle, sticky nor grainy)...45
3. Flavor—taste and odor...35

Total 100

PAstry

Those who have made a study of foods say that children under 6 years of age should not eat pastry. It is not included on the “Food Selection Score Card” which gives the foods we need each day. Pastry is considered a rich dessert and at its best is difficult to digest because the starch grains of the flour are surrounded by fat. Let us think of pastry as an occasional dessert for grown-ups. 4-H club girls enjoy preparing food for older folks. This problem gives us a chance to learn some things about making good pastry.

CHARACTERISTICS OF GOOD PIE CRUST

Good pie crust is flaky, that is, its surface has a somewhat rough, blistered appearance rather than a smooth firm one. It is tender enough to cut easily with a fork, but does not crumble. It is a golden brown color around the edge, a somewhat lighter brown on the bottom; and even the containing a filling it is crisp on the bottom as well as along the edges.

Authorities say that the secret of making good, flaky pastry is largely a matter of not over-mixing the ingredients. If the fat, flour, and liquid are divided into tiny particles and these thoroughly mixed they tend to stay that way and give a smooth, solid, tough crust which browns unevenly, if at all. Since it is easier for the inexperienced person to over-mix when using the fingers, we recommend that club girls cut in the shortening with two knives.

PLAIN PASTRY

\[
\begin{align*}
\frac{3}{4} \text{ c. general purpose flour} & \quad 2 \text{ T. cold water} \\
3 \text{ to } 4 \text{ T. cold fat} & \quad \frac{1}{2} \text{ t. salt}
\end{align*}
\]

This recipe makes one medium sized crust.

1. Get the necessary ingredients and utensils.
2. 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.
3. Sift and measure the flour. Measure the salt. Turn them into the mixing bowl.
4. Measure the fat and add to the flour.
5. Measure the water.
6. Combine the ingredients as follows:

MEAL PLANNING AND PREPARATION

a. Mix the fat, flour and salt by cutting with two knives. Hold one in each hand with the blades crossed, cutting back and forth thru the mixture until it is separated into particles, none of which are larger than a navy bean.
b. Add the water to the fat-flour mixture slowly—about \( \frac{1}{4} \) 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.

7. 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.

8. Shape and roll as follows:
   a. 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.
   b. 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 reduced with flour.
   c. Continue rolling until the crust is about \( \frac{1}{4} \) inch thick. Loosen it from the board.

9. 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.

10. Treatment of crust for different pies.
   a. 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 off the pastry about \( \frac{1}{4} \) inch larger than the pan, roll the extra dough onto the rim of the pan, and pinch portions of the dough to the crust. If baked without the pan, prick the crust. If baked in a round pan, pinch the edges together, prepare the edge as above. Add part of the filling.
   b. For a one-crust pie in which the crust and filling are baked together: 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.
   c. For a two-crust pie, roll the second portion of the dough in the same manner as the first into a sheet \( \frac{1}{4} \) inch thick. Loosen from the board, and cut small holes in the center. These holes allow steam to escape. If the crust is not covered by another pan. During the first part of the baking, while it is still soft, prick wherever it bulges.
   d. For a two-crust pie in which the crust and filling are baked together, prepare the edge as above. Add part of the filling.
   e. For a two-crust pie, roll the second portion of the dough in the same manner as the first into a sheet \( \frac{1}{4} \) inch thick. Loosen from the board, and cut small holes in the center. These holes allow steam to escape. If the crust is not covered by another pan. During the first part of the baking, while it is still soft, prick wherever it bulges.
   f. For a two-crust pie in which the crust and filling are baked together, prepare the edge as above. Add part of the filling.
   a. Pastry shells—450° F. or a hot oven for 12 to 13 min.
   b. Filled crusts—The time and temperature of baking varies with
      the filling.
      
      **CUSTARD PIE**
      
      2 eggs
      1½ c. sugar
      ½ t. nutmeg
      2 c. milk (1½ c. milk and ½ c. thin cream may be used.)
      Prepare the pie shell and bake until brown.
      While crust is baking prepare the filling.
      Heat milk in a double boiler.
      Beat eggs in bowl until the yolks and whites are well mixed, but only
      slightly foamy.
      Mix the sugar with eggs. If cream is used stir it into the egg-
      sugar mixture.
      Stir the hot milk slowly into this mixture.
      Pour part of the filling into the hot crust. Place in the oven. Add
      the rest of the filling. Sprinkle the nutmeg over its surface. Bake
      at 300° F. or in a slow oven until the custard is baked. Serve the
      same day. Do not cut until it is cold.
      **Variations.**—Add ½ c. of cocoanut to the custard. If the custard
      filling is baked with the crust bake at 450° F. (which is a hot oven)
      for 15 minutes, then reduce to 300° F. or a slow oven for 25 minutes.
      
      **LEMON CHIFFON PIE**
      
      4 eggs yolks
      2 egg whites (reserve the other
      ¼ to ¾ c. sugar
      ¼ t. salt
      Grated rind of ½ lemon
      Juice of 1 large lemon
      (Outside part of rind)
      Beat the egg yolks until lemon colored. Combine with sugar, lemon
      juice, and grated rind. Cook until thickened in a double boiler. Why
      should we be careful not to over-cook this mixture? Remove from the
      heat and fold in the stiffly beaten egg whites. Pour into a baked shell.
      
      **MERINGUE**
      
      2 egg whites
      4 T. granulated sugar
      Few grains of salt
      Add salt to the egg whites and beat until they are stiff, but not
      dry. Fold in the sugar 2 T. at a time and beat until the mixture
      stands in peaks. Immediately spread it over the pie filling, being care-
      ful 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**
      
      4 c. sliced apples (4 or 5 apples)
      1 T. butter
      ¼ c. sugar (increase for sour apples)
      1 T. flour
      ¼ 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 in a medium
      oven, 350° F., until the apples are tender and the crust is a golden
      brown. Test apples by sticking a toothpick thru a hole in the upper
      crust.
**BEFORE SHANK**
1. **SOUP BONES**
2. **FLANK**
   - **FLANK STEAK**
   - **2 STEWS OR HAMBURGER**
   - **PLATE**
   - **2 SHORT RIBS**
   - **BRISKET**
   - **1 STEW OR BONED AND ROLLED ROASTS**
3. **FORE SHANK**
   - **HIND SHANK**
   - **T03 SOUP BONES**
   - **HIND SHANK**
   - **T03 SOUP BONES**
   - **FRAME CLOTH**
   - **ROUND**
   - **1 TO 6 ROUND STEAKS**
   - **15 HEEL OF ROUND**
   - **RUMP**
   - **STEAKS OR ROASTS**
   - **SHORT LOIN**
   - **TO 4 RIB ROASTS**
   - **5 SHORT RIBS**
   - **TRIMMED CHUCK**
   - **1 & 2 BOTTOM CHUCK ROASTS**
   - **3 & 4 TOP CHUCK ROASTS**
   - **5 CHUCK RIB ROASTS**
   - **NECK**
   - **ROT ROASTS**
   - **STEWS OR HAMBERGER**

**WHOLESALE CUTS AND SUBDIVISIONS**

**ALL PERCENTAGES BASED ON CARCASS WEIGHT**

- **HINDQUARTER** 48.0%
- **FOREQUARTER** 52.0%
- **ROUND** 24.0%
- **RUMP** 15.0%
- **FULL LOIN INC. SUET** 20.5%
- **LOIN END** 7.0%
- **SHORT LOIN** 10.5%
- **KIDNEY KNOB** 3.0%
- **FLANK** 3.5%

**NUMERALS IN CIRCLES REFER TO WHOLESALE CUTS AND MAJOR SUBDIVISIONS OF SUCH CUTS. OTHER NUMERALS REFER TO RETAIL CUTS.**

**FIG. 3.**

**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. Have 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 ages.

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. Meat must be kept free from flies and dust. 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, so 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 AND USES**

<table>
<thead>
<tr>
<th>Cuts</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, simmering</td>
</tr>
<tr>
<td>Rib</td>
<td>Rich flavor, very tender. A large muscle known as the &quot;eye&quot; and the rib make it easy to identify the prime rib roasts.</td>
<td>Oven roasts</td>
</tr>
</tbody>
</table>

**CUTS OF BEEF AND USES**

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<tr>
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<th>Characteristics</th>
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</tr>
</thead>
<tbody>
<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 &quot;short ribs&quot;, pot roasts, stews</td>
</tr>
<tr>
<td>Brisket</td>
<td>Smooth, tender, free from fat. Highly prized. Grown in parts of the body that are not used much.</td>
<td>Steaks, Swiss, Spanish</td>
</tr>
<tr>
<td>Rib ends</td>
<td>Round or oval in shape with a small round bone and a large proportion of lean. Tender, juicy, good flavor. &quot;Top of the round&quot; is the most tender, and has one large muscle while the &quot;bottom round&quot; has two muscles.</td>
<td>Rolled</td>
</tr>
<tr>
<td>Fore Shank</td>
<td>Bone and gristle, varying amounts of lean.</td>
<td>Soups, stews</td>
</tr>
<tr>
<td>Rump</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>
<tr>
<td>Loin</td>
<td>Sirloin steaks contain sections of back bone and hip-bone. Porterhouse steak contains a T-shaped bone. Club steaks are similar to Porterhouse but contain no tenderloin. Loin contains the choice cuts of hind quarter.</td>
<td>Steaks, roasts, panbroiling</td>
</tr>
<tr>
<td>Flank</td>
<td>Plank steaks are boneless and there are but two in each carcass. The flat muscle fibers run lengthwise, making it necessary to &quot;score&quot; the steak across the grain.</td>
<td>Stewing, broiling, braising, grinding</td>
</tr>
</tbody>
</table>

**CUTS OF PORK AND USES**

<table>
<thead>
<tr>
<th>Cuts</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>Stewed, broiled, pickled</td>
</tr>
<tr>
<td>Hams</td>
<td>Solid meat, little bone.</td>
<td>Fresh—steaks and roast. Cured—baked, boiled, pan-broiled</td>
</tr>
<tr>
<td>From hind quarter as round of beef</td>
<td>Usually cured.</td>
<td></td>
</tr>
<tr>
<td>Fat back—thick layer of fat removed in one piece</td>
<td>Large percentage of fat. Cured as salt pork. Used as larding fat.</td>
<td>Salt pork, pan-fried, seasoning for other foods</td>
</tr>
<tr>
<td>Clear bellies, as flank and plate of beef</td>
<td>Fat and lean streaked. Cured as bacon.</td>
<td>Broiled or panfried</td>
</tr>
</tbody>
</table>
CUTS OF PORK AND USES

<table>
<thead>
<tr>
<th>Cuts</th>
<th>Characteristics</th>
<th>Methods of Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loins</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</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>Panfried and seasoning with vegetables</td>
</tr>
<tr>
<td>Spareribs</td>
<td>Lean and fat. Good flavor.</td>
<td>Baked, or boiled</td>
</tr>
<tr>
<td></td>
<td>Not much meat.</td>
<td></td>
</tr>
<tr>
<td>Tenderloin</td>
<td>Choice, lean, tender, boneless. Sold as part of loin roast or separately.</td>
<td>Broiled, panfried, 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

General aims in meat cookery.
1. To improve appearance.
2. To develop flavor and make more palatable.
3. To sterilize. (Essential with pork).
4. To soften connective tissue.

Special aims and methods for
1. Tender meats
   Aim—to retain tenderness.
   Methods of cooking—dry heat.
   Roasting, broiling, pan broiling.
2. Less tender meats
   Aim—to soften connective tissue and increase tenderness.
   Methods of cooking—moist heat.
   Braising, stewing, simmering.
   Mechanical methods.
   Marinating, pounding, grinding.
   Aim—to extract all nourishment.
   Methods of cooking—crack bones, place in cold water and simmer.

Some principles influencing meat cookery
1. Dry heat toughens connective tissue.
2. Moist heat softens connective tissue.
3. Weak acids as tomato juice and vinegar tend to dissolve connective tissue.
4. Grinding or pounding divides or breaks the connective tissue.
5. Cold water dissolves part of the mineral salts, the soluble albumen and extractives.
6. Ripening or ageing while stored softens the meat fibers.

Terms Used in Meat Cookery
1. Roasting—cooking uncovered in an oven without the addition of water.
2. Broiling—cooking uncovered by direct heat from hot coals, as gas flame or an electric element.
3. Panbroiling—cooking uncovered in a hot frying pan, pouring off fat as it accumulates in the pan.
4. Braising—cooking covered in a small amount of water after browning in a small amount of hot fat.
5. Stewing—or simmering—cooking in water at simmering temperature, which is below boiling.
6. Searing—browning the surface of meat quickly in order to develop flavor and improve appearance.
7. Frying—cooking in fat
   small amount of fat—also called sautéing.
   deep layer of fat—also called deep-fat frying.
8. 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.
9. 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:

Roasts cooked at low temperatures
1. Are superior in every way to those cooked at high temperature.
2. Are more uniformly cooked throughout the entire roast.
3. Have a decrease in cooking losses.
4. Have better flavor and are more palatable.
5. Are more juicy.

Searing
The practice of searing when starting meat to cook was based on the theory that the coagulation of protein on the surface of the meat prevented escape of juices and decreased cooking losses. We now know that searing does not improve the interior of the roast nor decrease cooking losses. Recent experiments with seared and unseared meats show that searing:
1. Increases loss of juice and
2. Increases shrinkage but
3. Improves outside appearance and
4. 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 (not many homes have one) 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:

1. In general, a larger roast requires less time per pound than a smaller roast.
2. A thick compact piece of meat requires more time per pound than a less compact piece of the same weight.
3. A roast with a bone will cook in a shorter time than a piece from which the bone has been removed.
4. Roasts with a large amount of fat cook more quickly than lean roasts.
5. Roasts cooked at low temperature require a little more time per pound.

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. per Ib.</th>
<th>Meat</th>
<th>Min. per lb. per Ib.</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 pan in the center of oven. A low oven temperature—about 300° 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 1 1/2 c. water.
Cover tightly and simmer until tender.
Time—about three hours. Turn occasionally.
Drippings should cook down brown for gravy.

SWISS STEAK

1 1/2 lbs. beef round, about 1 inch thick 1/4 c. flour
2 T. bacon, fat or lard 3/4 t. salt
1 1/4 c. boiling water 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—
1. Onions may be browned in the fat before searing the meat if desired.
2. 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.

MEAL PLANNING AND PREPARATION

MEAT LOAF

1 egg
1/4 c. water or tomatoes
1 1/2 lbs. chopped beef
1/2 t. salt
3/4 t. pepper
or 1 lb. beef and 1/2 lb. pork
4 slices bacon

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 thru 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 1/2 t. salt.

BROWN STEW

1 lb. beef, lamb or veal
1 c. diced turnips
Bacon fat or suet
2 c. diced potatoes
3 T. flour
1 1/2 qts. hot water
4 c. diced onions

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 meat is nearly tender, about two hours. Add the salt and vegetable and cook about 1/2 hour more or until the vegetables are tender. Add salt and pepper to taste.

Variations—The vegetables may be varied according to those available. Chopped parsley or celery leaves add a nice flavor. Vegetable soup may be made by searing only one-half of the meat cubes and adding more water.

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 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 3/4 lb. chopped beef or pork instead of 1 1/2 lbs. chopped beef.

BACON

Bacon fat smokes easily and to obtain the best flavor it should be cooked below the smoking temperature. If this is done the room will not be filled with smoke.

Pan broiling or cooking in pan without fat.
1. Place a single layer in a cool frying pan.
2. Place over a low heat.
3. Turn frequently.
4. Drain excess fat frequently so the bottom of pan is only well greased.
5. When bacon is golden brown and evenly crisp place on a hot platter.

Cooking in Oven.
1. Place slices in a dripping pan.
2. Place dripping pan on a rack in the middle of a hot oven.
3. Turn bacon frequently for best results.

LEFT-OVER MEATS

Many attractive and appetizing dishes may be made from left-over meats. If we are careful of the way we prepare them they may be as good as when first cooked. What are some of the ways in which your mother uses left-over meat? Find other recipes and try them.

Meat Pie.—Place left-over meat stew in a baking dish and cover with baking powder biscuit dough. Pat or roll to % in. thickness and bake about 20 min. in a moderately hot oven. The dough may be cut with a biscuit cutter and placed close together on top of the stew. The crust should be nicely browned on top. Mashed potato into which 1 egg white or 1 whole egg has been beaten may be used for a crust in place of the biscuit dough.

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

Cleaning and Cutting.
1. Singe to remove hairs by holding over a flame.
2. Remove pin-feathers with the point of a knife or tweezers and wash the skin thoroughly.
3. Remove the feet, wings, drumsticks, and thighs, cutting thru the joints.
4. Separate the gullet and windpipe from the neck by running the index finger around under the skin.
5. Separate the body by removing the shoulder blade and cutting carefully between the breast and back, thru 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.
6. Separate the wishbone from the breast by inserting the knife at the upper end of the breast bone cutting down thru the flesh and turning the knife outward to disjoint it.
7. Disjoint the neck from the back and remove the lungs and kidneys. Cut the oil bag from the tail.
8. Separate the giblets, that is, the heart, gizzard, and liver from the intestines.
9. Cut the tough membrane from the heart.
10. Cut thru the gizzard to the inner sac which should be removed without breaking.
11. 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.

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

STEWED FOWL

Clean and cut in pieces. Cover with boiling water and simmer 15 minutes. Add 1 t. salt, cover, and simmer 1 1/2 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 1 1/2 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 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 sharp knife, beginning at tail. Split the under side and remove entrails. Wash thoroly inside and outside in cold water. Do not let the fish stand in cold water after washing. Dry with a clean towel. If 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 large fish is suitable to stuff and bake. Clean and wash fish, remove bones if desired and wipe dry. Sprinkle lightly with salt both inside and outside, stuff and hold together with tooth picks. Cut 3 diagonal gashes on each side of backbone and insert narrow strips of fat salt pork or lay slices of bacon 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
4 T. butter, melted
3/4 t. salt
1 t. parsley
1/2 t. pepper
1 T. chopped pimiento

BAKED HALIBUT WITH TOMATO SAUCE

2 lbs. halibut
2 c. tomatoes
1 c. water
1 T. chopped onion
3 cloves

Tomato Sauce.—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. Clean fish, put into baking dish, pour around it half the sauce and bake 30 minutes, basting often. Remove to hot platter and pour the remaining sauce around it.
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 every-day home meals. How would you like to work out a new idea for the dinner? Some clubs enjoy serving Mother-Daughter or Father-Daughter dinner. The menu discussed in this problem is suitable for such an occasion.

Cooking club members will be interested in knowing that the following dinner menu was worked out by a Fillmore County canning club girl who was also an assistant club leader. Her meat exhibit was selected for competition at Chicago and it was accompanied by this menu in which one of the jars of meat was used.

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

**MENU**

<table>
<thead>
<tr>
<th>Dish</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear Tomato Soup</td>
<td></td>
</tr>
<tr>
<td>Crackers</td>
<td></td>
</tr>
<tr>
<td>Roast Beef</td>
<td></td>
</tr>
<tr>
<td>Mashed Potatoes</td>
<td></td>
</tr>
<tr>
<td>Sunset Salad</td>
<td></td>
</tr>
<tr>
<td>Whole Wheat Rolls</td>
<td></td>
</tr>
<tr>
<td>Brown Betty</td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td></td>
</tr>
<tr>
<td>Brown Gravy</td>
<td></td>
</tr>
<tr>
<td>Buttered Greens</td>
<td></td>
</tr>
<tr>
<td>Brown Betty</td>
<td></td>
</tr>
<tr>
<td>Sweet Sauce</td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td></td>
</tr>
</tbody>
</table>

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 meal 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 girl's homes but they want it to be a real treat to their mothers so decide to do all of the work connected with it themselves. 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 Why's For Young Cooks" problem V 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 most of us would enjoy this salad with the main course, so we will serve it that way and have it placed on the table when the guests are seated. Fig. 6 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 table. Place salt and pepper shakers at convenient intervals between covers and on a line with the water glasses.

Fill water glasses and place 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, 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 in this way, go to the left side of the guest and place the soup with the left hand. While doing this the right hand is held 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, a 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 plate low enough so the guest may easily help herself.

There are always many things to do when a dinner is being served, so it is a good plan to do everything before hand which can be done early. The meat may be sliced and kept 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. The plate usually looks more attractive if a small amount of gravy is 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 some one 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 as to keep your fingers away from 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 and manage in this way. The guest should leave her knife and fork placed across the edge of the dinner plate. Remove 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 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 used and 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 the table needs to be crumbed, this should be done before the dessert is placed. Crumb where necessary, using 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 good food. The club girls acting as hostesses planned beforehand to do their share toward keeping up a pleasant conversation at the table. Mothers are always interested in club activities and each girl could tell about something the club had 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
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 so we are passing it on.

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 cheery chintz
You add to a shabby chair;
It's the scarred old kitchen table
Made brave with a coat of paint;
That is 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, 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?

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. Fig. 7 is a folded and unfolded view of a simple invitation. After folding, the point may be sealed with the clover emblem.

A written invitation to an informal party is merely a note inviting a person in a cordial way to attend. It may read:

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

Fig. 7.—Unfolded and Folded View of Invitation.

Written invitation to an informal party is merely a note inviting a person in a cordial way to attend.
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 can 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, so 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 age or rank. If your mother’s name is different from your name it is given, “Miss Williams, I want to present you to my mother, Mrs. Martin.”

GENERAL RULES FOR INTRODUCTIONS

1. Present a younger person to an older person. Example—given above.
2. Present a boy to a girl or a man to a woman. Example—“Miss Jones, may I present Mr. Smith?”
3. Present a less prominent person to one of greater importance.

The generally accepted form of acknowledging introductions is “Hello,” but it is necessary, but it is usually said 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, so 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 age or rank. If your mother’s name is different from your name it is given, “Miss Williams, I want to present you to my mother, Mrs. Martin.”

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 possible way. 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.

FRUIT CUP

1 grapefruit
4 slices canned pineapple
or 1 c. fresh pineapple
2 oranges
or 1 c. canned cherries

Cut pineapple in small pieces. Dice oranges and grapefruit as suggested in problem I. 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 is sometimes used as a garnish. It may be tinted in this way. Place a slice of pineapple in a saucer and sprinkle it generally with red sugar. Turn it over and sprinkle sugar on the other side. As the sugar dissolves it tints. Cut the tinted pineapple in small 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**

\[
\begin{align*}
\text{1/2 c. fat} & & 3 \text{ c. flour} \\
1 \text{ c. brown sugar} & & 1 \text{ t. cream of tartar} \\
2 \text{ eggs} & & 1 \text{ t. soda} \\
1 \text{ t. vanilla} & & 1 \text{ t. salt} \\
\end{align*}
\]

Cream the fat and sugar. Add well beaten eggs 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 and let stand over night in a cool place. Slice thin and bake in a moderate oven.

Variation.—1/2 c. chopped nuts, dates, or raisins may be added.

**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 "good-bye" 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 their 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?
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(6-33-5M)