1937

Hows and Whys of Young Cooks : Extension Circular 9-02-2

Jessie G. Greene

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Hows and Whys for Young Cooks
Prepared for 4-H Cooking Clubs

The University of Nebraska Agricultural College
Extension Service and the United States Department of Agriculture Cooperating
W. H. Brokaw, Director, Lincoln
Hows and Whys for Young Cooks

JESSIE G. GREENE

It is not only fun to cook but it is a worthwhile accomplishment to be able to plan and prepare attractive, healthy meals. The cooking club project aims to teach young cooks some of the Hows and Whys of food selection and of cooking. To be eligible for this project a girl should be at least 12 years of age or have completed the “Learning to Cook” project. To complete the “Hows and Whys for Young Cooks” project, each member is required to:

- Score food habits at the beginning and close of the project.
- Prepare or assist with the preparation of 50 meals.
- Meet requirements in each problem as follows:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Requirements</th>
<th>At Least</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Prepare fresh fruit</td>
<td>6 times</td>
</tr>
<tr>
<td></td>
<td>cooked fruit</td>
<td>3 times</td>
</tr>
<tr>
<td></td>
<td>fruit beverages</td>
<td>3 times</td>
</tr>
<tr>
<td></td>
<td>Read pages 5, 6, 7, 8, 9</td>
<td>3 times</td>
</tr>
<tr>
<td>II</td>
<td>Prepare milk beverages</td>
<td>2 times</td>
</tr>
<tr>
<td></td>
<td>cream soups</td>
<td>2 times</td>
</tr>
<tr>
<td></td>
<td>eggs</td>
<td>6 times</td>
</tr>
<tr>
<td></td>
<td>custards</td>
<td>2 times</td>
</tr>
<tr>
<td></td>
<td>other puddings</td>
<td>2 times</td>
</tr>
<tr>
<td></td>
<td>Read pages 14 and 15</td>
<td>3 times</td>
</tr>
<tr>
<td>III</td>
<td>Prepare cooked cereals</td>
<td>4 times</td>
</tr>
<tr>
<td></td>
<td>quick breads</td>
<td>2 times</td>
</tr>
<tr>
<td></td>
<td>Read pages 27, 28, 29, 30</td>
<td>3 times</td>
</tr>
<tr>
<td>IV</td>
<td>Prepare whole wheat bread</td>
<td>2 loaves</td>
</tr>
<tr>
<td></td>
<td>white bread</td>
<td>2 loaves</td>
</tr>
<tr>
<td></td>
<td>rolls</td>
<td>1 time</td>
</tr>
<tr>
<td></td>
<td>cookies</td>
<td>1 time</td>
</tr>
<tr>
<td></td>
<td>Read pages 34, 35, 36, 37, 43</td>
<td>3 times</td>
</tr>
<tr>
<td>V</td>
<td>Plan, prepare, and serve</td>
<td>1 breakfast</td>
</tr>
<tr>
<td></td>
<td>Prepare salads</td>
<td>2 times</td>
</tr>
</tbody>
</table>

Complete the requirement for each problem as soon as possible after it is presented in the club meeting. The way to learn to cook is to cook whenever you have the opportunity. We hope you will not be satisfied with merely meeting the requirement. Keep the record—it will be simple if kept up to date.

This project is arranged as a breakfast unit, but if it seems advisable, Problem II may be used first. When this is done, use directions on pages 4 to 9 in connection with Problem II.

Problem I—Food Selection—Fruit

Good health is not an accident. It is the result of the way we and our ancestors have lived. Food plays such an important part in good health that we place it first in the following list of things which help us to have good health.
Wholesome food  
Plenty of sleep  
Sunshine and fresh air  
Exercise  
Freedom from worry  
The desire to be helpful to others

If food is so important then we need to learn all we can about how to select it wisely. The 4-H cooking club problems will help us to answer the following questions: What foods should we eat to be healthy? How shall we prepare and serve our foods?

DIRECTIONS FOR USING FOOD SELECTION SCORE CARD

Score yourself on general food habits, that is, on what you are in the habit of having and not your diet for a certain day, because it may not be an average day. If you do not as a rule use as much as the lowest number on the score card, give yourself zero. Do not divide the numbers.

Wholesome food plays an important part in good health.

**Food Items**

<table>
<thead>
<tr>
<th>Food Items</th>
<th>Perfect Score</th>
<th>1st Score</th>
<th>2nd Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Milk</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 full cups 10, 3 full cups 15, 4 full cups 20</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vegetables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 serving 5, 2 servings 10, 3 servings 15. Potatoes may be included as one of the above servings. If a yellow or green vegetable is included, as carrots, squash, greens, or lettuce, 5.</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fruits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 serving 10, 2 servings 15</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If raw fruit or vegetables or canned tomato is included, 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Whole Grain Products</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 serving 10, 2 servings 15</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cheese, Eggs, Meats, Dried Beans or Peas</strong></td>
<td>15</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><strong>Water (total liquid)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 quart 5, 1½ quarts 10</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS**

100

**Deductions**

Use of tea or coffee 10  
Eating sweets between meals 10

Total Deductions

**TOTAL SCORE**

100

Milk includes milk cooked in food or taken as a beverage.

**Raw vegetables and fruits.**—Because the vitamin content of many fruits and vegetables may be somewhat lessened by cooking or drying, it is well to eat raw fruit or vegetables at least once a day.

Whole grain products include whole-grain cereals used as breakfast foods and quick or yeast breads made from graham, whole wheat, rolled oats, or corn meal.

**Water** includes all the liquid taken in beverages.

This score card emphasizes the need of certain essential foods in a well selected diet. It is not intended to represent a complete diet, but serves as a measuring stick to determine whether the body's needs for the various food nutrients are being met. Moderate amounts of fats, sweets, bread and other desirable foods should be added to the foods listed above. The size of the serving should vary according to the need of the person; an average serving of vegetables, fruits, or cereals is one-half cup.

If your score shows that your food habits are above 90, try to keep them so. If your score is below 90, try to raise it by improving your food habits where they need it.

**PLANNING MEALS FOR HEALTH**

Careful planning of meals is worth while because it results in better health and it means a saving of time, energy, and money. Club girls help mother with the planning and preparation of many home meals. They will desire to learn how to do this well. It is necessary to know something about the composition of different foods and their uses in the body in order to plan meals which will supply body needs.

Foods serve three important uses in the body: they build and repair tissues, furnish energy and regulate body functions. You will see by the following table that some foods serve two, while others serve all three of these purposes in our bodies.

**Body building.**—The substances necessary for body building and repair are protein, mineral nutrients and water. The best building foods are milk, eggs, cheese, meat, dried peas and beans, whole grains, fruits, and vegetables. All of these are good sources of mineral nutrients and all except the last three are good sources of protein.

**Energy foods.**—These are principally starches, fats, and sugars, although protein foods supply some energy.

**Body-regulating foods.**—Besides their value as body-building foods, mineral nutrients are also necessary as body-regulating foods. The best regulating foods are water, milk, vegetables, fruits, and whole grains.

That the right kind of food is needed to promote health is shown by what happens when certain food nutrients are left out of the diet or are present in too small amounts. When not enough foods rich in iron are used a disease known as anemia results. Babies sometimes develop rickets because of a shortage of calcium, phosphorus, or vitamin D, or a poor balance between the three. In the oriental countries a nervous disorder known as beriberi results when the people live too largely on a diet of polished rice, which has had most of its vitamin B removed. In the southern part of our own country there have been occasional outbreaks of a disease known as pellagra, which develops when the people live on a diet consisting almost exclusively of corn meal and fat salt pork. Oranges, tomatoes, and raw vegetables and fruits are particularly good sources of vitamin...
When this vitamin is lacking, a disease known as scurvy results. Vitamin C is also necessary for the health of the teeth and gums. Dentists tell us that we have a tendency to neglect the foods which need mastication. As a result, teeth and gums are not exercised enough to keep them healthy. Vitamin A is concerned with the building up of resistance against infections such as colds.

We have given only a few examples of the effects of poor diet. It is impossible to treat the subject fully in this circular. Volumes have been written on the cause and treatment of diseases and disorders which could be prevented by a wise choice of foods.

This table roughly divides foods into six groups according to their composition.

<table>
<thead>
<tr>
<th>Food Nutrient</th>
<th>Uses in the Body</th>
<th>Examples</th>
</tr>
</thead>
</table>
| I Proteins    | Build and repair muscular tissue; supply some energy | Animal protein: Meat, fish, eggs, milk, cheese  
Vegetable protein: Peas, beans, oatmeal, nuts |
| II Carbo- hydrates | Produce energy; build fatty tissues when eaten in excess; furnish bulk, which stimulates action of the intestine | Starch: Cereals, vegetables, nuts  
Honey, molasses, fruits and some vegetables  
Cellulose: Framework of fruits, vegetables, covering of grains |
| III Fats | Produce energy; build fatty tissues | Animal fats: Cream, butter, bacon, fat of meat, egg yolk  
Vegetable fats: Nuts, coconut, olive oil, corn |
| IV Mineral Nutrients | Build bones and teeth; supply mineral nutrients to digestive juices and all tissues; help regulate digestion, circulation, and other body processes | Abundant in fruits and vegetables; milk, eggs, whole grain cereals, lean meats |
| V Water | Supplies water to the tissues and fluids of the body; aids digestion, circulation, and removal of waste; regulates body temperatures | Abundant in all beverages, fruits, and vegetables |
| VI Vitamins | Promote growth; keep people healthy | Vegetables, fruits, milk, butter, eggs  
Whole grain cereals |

After we know what foods the body needs and the purpose different foods serve in our bodies, the next step is to plan the home meals so that we are sure that each member of the family is well nourished. A club girl remarked that she always thought of the food selection score card when she was selecting a meal at the cafeteria. Why not use it as a basis for our planning? Let us see what sort of standard it gives us for planning meals.

Drink or use in other foods 4 cups (1 quart) of milk daily. For father, mother and other grown people the amount of milk may be 2 cups.

Eat at least three servings of vegetables daily. One serving may be potatoes. One serving should be a yellow or green vegetable, such as carrots, squash, greens, cabbage, lettuce, string beans, or peas.

Eat two servings of fruit daily.

Eat one serving of any two of the following foods: cheese, eggs, meat, dried beans, or peas.

Eat two servings of whole grain products daily.

Drink six glasses (1 1/2 quarts) of water daily.

With this standard before you, work out a problem at home. Perhaps we should call it a nutrition problem. It is this: Plan a day's meals that will score 100 by the food selection score card. Compare and discuss menus at the next club meeting.

STANDARDS FOR PREPARING AND SERVING FOOD

The Food Selection Score sheet gives standards for our daily diet. Now let us consider some of the other standards which we should keep in mind as we are preparing and serving food. These standards may be grouped under the four headings: cleanliness, neatness, accuracy, and economy.

Cleanliness.—Have your hair well combed and pinned back before you begin so you will not need to touch it while cooking. A cap or hair band helps to avoid the danger of hair falling in food.

Wear a clean apron while preparing food.

Begin work with clean hands and clean finger nails. Wash hands carefully with soap and warm water, then wash them again if you handle your handkerchief, fuel, or any dusty or soiled object.

Do not put the spoon from which you have tasted back into the food you are preparing.

Do not use the stirring or mixing spoon for a tasting spoon.

Do not taste from a spoon which has been used by another person.

Neatness and order.—Keep the stove, work table, utensils and kitchen neat and orderly as well as clean. This can be done if we think about it as we are working.

Use a utensil pan, that is, a pan in which to lay spoons, forks, egg beaters, etc. This will protect the table.
Work carefully. Pile used dishes. Keep table top free from flour, water, dough, or any food with which you are working.

**Economy.** — A 4-H club member should learn to save time, energy, food, and fuel. We must think beforehand as well as while we are doing our work. The following suggestions will help us to practice economy. As you work, think of other ways to save.

Read the recipe carefully and decide what utensils and supplies are necessary.

Collect and arrange them conveniently on the work table.

Plan to have heat for cooking ready at the proper time.

Save dishes by measuring dry ingredients first, then liquids and fats.

Scrape food carefully from mixing bowls and all cooking utensils. It may seem only a small amount but in time, a great deal of food is saved in this way. A plate scraper is convenient for this.

Watch food carefully so that it does not burn or boil over on the stove.

Why should we save time? Because there are so many worth-while things to do and so many ways in which we can improve ourselves. Girls who share home responsibilities realize that the necessary duties of life take a great deal of time. In fact, unless we plan our work carefully, we will not have time for helping other people, for recreation, reading, and the numerous other things that make our lives happier.

**Accuracy.** — If we measure accurately we are more likely to have success with our cooking. Take level measurements. Our mothers have had so much experience that they do not need to measure as carefully. In fact, an experienced cook measures a great deal by sight. 4-H club girls should learn to measure accurately and then practice until they can do it quickly.

The following directions for measuring will be helpful:

**HOW TO MEASURE**

All measurements in the 4-H recipes are level. When using dry ingredients such as sugar and flour, fill the spoon or cup (which holds one cup to the top), a little more than full, then level the product off with the dull edge of a knife, being careful not to press it down. The cups (Fig. 1) each hold one level cupful. Always sift flour before measuring.

Stir baking powder and soda in the can to make them lighter before measuring. Pack butter or lard solidly.

**In a cup.** — Because china cups are different sizes, we can measure much more accurately in a measuring cup. Some standard measuring cups are divided into fourths on one side and into thirds on the other. They hold one-half pint. When measuring a cup of flour, pile the sifted flour lightly into the cup with a large spoon and if the cup holds only one cupful it may be leveled with a knife. Cups that hold a little more than one cup as shown in Figure 2 are more suitable for measuring liquids. Dipping the cup into the flour packs it. Shaking the cup also packs the flour.

When measuring liquids, place the cup on the table so you can tell when the edge of the liquid reaches the proper mark on the cup.

**In a spoon.** — Spoons also vary in size so we can be more accurate if we have a set of standard measuring spoons. The accompanying pictures show how to measure something dry like flour with a teaspoon or tablespoon.

For one spoonful, level it with a knife. Place the sharp edge of the knife at right angles to the bowl of the spoon and run it along from the handle to the tip.

For one-half spoonful, divide one spoonful lengthwise through the middle.

For one-fourth spoonful, divide one-half spoonful crosswise a little closer to the handle than the tip of the spoon.

For one-eighth spoonful, divide one-fourth spoonful from the center of the spoon to the center of the outer rim.

For one-third spoonful, divide the spoon into thirds crosswise.

For one-sixth spoonful divide one-third spoonful in the center crosswise.
Buying Fruit

Buy fruit when it is in season because it is cheaper and the quality is superior. Select sound, ripe fruit. If it is to be kept for a while it should be purchased a little under ripe. Oranges, grapefruit, and apples are cheaper for family use if bought in quantities. Although they keep well, it is necessary to watch them carefully and discard any unsound fruit. In warm weather fruits that spoil easily should be kept in the refrigerator. They will keep best if not washed until ready for use.

Abbreviations, Weights, and Measures

<table>
<thead>
<tr>
<th>ABBREVIATIONS</th>
<th>WEIGHTS</th>
<th>MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>c.  — cup</td>
<td>1 T.</td>
<td>2 c.</td>
</tr>
<tr>
<td>t.  — teaspoon</td>
<td>3 T.</td>
<td>4 t.</td>
</tr>
<tr>
<td>T.  — tablespoon</td>
<td>16 T.</td>
<td>5 T.</td>
</tr>
<tr>
<td>qt. — quart</td>
<td>4 c.</td>
<td>7 qt.</td>
</tr>
<tr>
<td>gal. — gallon</td>
<td>2 c.</td>
<td>8 gal.</td>
</tr>
<tr>
<td>oz. — ounce</td>
<td>3 c.</td>
<td>10 oz.</td>
</tr>
<tr>
<td>min. — minute</td>
<td>15 lbs.</td>
<td>1 sq.</td>
</tr>
<tr>
<td>minute</td>
<td>1 peck</td>
<td>2 min.</td>
</tr>
<tr>
<td>1 sq. chocolate</td>
<td>1 oz.</td>
<td>3 min.</td>
</tr>
</tbody>
</table>

WHY DO WE EAT FRUIT?

You may wonder why the Food Selection score card calls for two servings of fruit each day and one serving of a raw fruit or vegetable or canned tomato. Let us make a list of some of the reasons:

1. Fruits are appetizers. Fresh fruits are especially appetizing.
2. Fruits are laxative, due to cellulose and acids. The woody fiber in fruits and vegetables is called cellulose. It does not digest but is valuable for roughage.
3. Fruits have energy value. The heat which food produces in our bodies is measured by calories. Find a table of 100 calorie portions and compare the fuel value of different fruits. Ask a Home Economics teacher to explain such a table to your club if possible.
4. Fruits contain mineral nutrients. The three principal ones needed by the body are iron, calcium, and phosphorus. Fruits, vegetables, and milk are the chief sources of these necessities. Certain club members might make a list of the foods that are rich in these minerals and report at the club meeting.
5. Fruits contain vitamins. They are, in general, excellent sources of vitamin C, good sources of vitamin B, and with a few exceptions, poor sources of vitamin A. Vitamin C is usually destroyed by heating, so fresh uncooked fruits and vegetables are its best sources. Citrus fruits (lemons, oranges, and grapefruit) are important sources of vitamin C.

If you have access to books on Home Economics, look up the tables showing which foods are rich in the different vitamins, minerals, and other food nutrients. This is not required but it will help make club work more to your liking.

BUYING FRUIT

Even though we raise fruits and vegetables and do considerable home canning we may buy some commercially canned products. Authorities tell us to buy the size and grade best suited to our needs. In order to do this we must know something about the sizes and grades.

The following table gives the sizes most frequently used for fruits and vegetables:

<table>
<thead>
<tr>
<th>Can Number</th>
<th>Average net weight</th>
<th>Contents in cups</th>
<th>Approximate number of servings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffet or picnic</td>
<td>8 oz.</td>
<td>1</td>
<td>2 small</td>
</tr>
<tr>
<td>No. 1 tall</td>
<td>11 oz.</td>
<td>1 1/2</td>
<td>2</td>
</tr>
<tr>
<td>No. 2 tall</td>
<td>16 oz.</td>
<td>2</td>
<td>3-4</td>
</tr>
<tr>
<td>No. 3 tall</td>
<td>20 oz.</td>
<td>2 1/2</td>
<td>4-5</td>
</tr>
<tr>
<td>No. 4 tall</td>
<td>28 oz.</td>
<td>3</td>
<td>5-7</td>
</tr>
<tr>
<td>No. 5 tall</td>
<td>33 oz.</td>
<td>4</td>
<td>6-8</td>
</tr>
<tr>
<td>No. 10 tall</td>
<td>5 lbs. 8 oz.</td>
<td>7</td>
<td>10-14</td>
</tr>
<tr>
<td>No. 15 tall</td>
<td>6 lbs. 10 oz.</td>
<td>13</td>
<td>20-26</td>
</tr>
</tbody>
</table>

Several sizes of cans look very much alike but the weights differ by several ounces. If we are to buy economically we should make it a habit to read the label. For an average family the size used most for fruits is No. 2 1/2 and for vegetables, No. 2.

The government is preparing standards for fruits and vegetables which are called Grade A (fancy), Grade B (extra standard or choice), Grade C (standard), and Off-grade (substandard). "Substandard" is the only label required by law but many canners are voluntarily using the grade names. If so labeled, the products must conform to the standards set. Fancy grades are the most perfect products carefully selected for uniformity of size, color, and ripeness. Any substandard canned vegetable entering into interstate commerce must be labeled "Below U. S. Standard. Low Quality But Not Illegal." Substandard fruits must be labeled, "Below U. S. Standard. Good Food—Not High Grade."

WAYS OF SERVING FRUIT

Fresh, uncooked fruit may be served as an appetizer or with cereals or in salads or as a dessert. Other ways are as follows:

Stewed fruit.

Dried fruits such as dates, raisins, figs or prunes with cereals or as confectons.

Baked fruits.

Many kinds of fruit or combination of fruits may be used in salad.

Many kinds of fruit may be used in short cakes, cobblers, batter puddings, pies, desserts with gelatin, tapioca, rice, or cornstarch.

BEVERAGES

HONEY WITH FRUIT

Honey may be used in many ways instead of sugar. Honey intensifies the natural fruit flavors and is delicious when drizzled on fresh fruits served for breakfast, for salads or desserts. The sugars in fruit and in honey are natural sugars so they blend
perfectly. To warm honey, place the honey jar in warm water until it is thin enough to drizzle in a fine stream. If thick honey is poured on, the product will be too sweet. Honey may be substituted for all or part of the sugar for sweetening fresh or cooked fruits or in fruit beverages.

WHOLE FRUIT

Apples, oranges, bananas, peaches, pears, plums, and grapes may be served whole with their skins on. Fruit served in this way should be washed and dried before placing on the dining table. If the skin of fruit is to be eaten it is especially necessary to wash it carefully. Small fruits such as berries are most conveniently washed by placing them in a colander and either pouring water over them or moving the colander about in a pan full of water until they are clean. Wash fruit like strawberries before serving, to prevent loss of juice.

TO PREPARE ORANGE OR GRAPEFRUIT IN THE SKIN

Cut fruit in halves crosswise. Remove seeds with a fork. With a sharp knife loosen each section from the membrane around it; follow the membrane around the section toward the rind and back to the center. Sections of grapefruit are more easily lifted out if the center is not removed. For special occasions a fresh or preserved cherry or strawberry may be placed in the center of each half. Usually only half a grapefruit is served to each person. Grapefruit may be served with sugar or salt.

TO DICE ORANGES OR GRAPEFRUIT

Prepare as for serving in the skin. Remove the half sections and cut again. Cut sections on a board using a sharp knife. Squeeze out any juice left in the skin. Use navel oranges for dicing, since the sections are more easily separated. This is an attractive way to prepare the fruit for salad or gelatin. The thin membrane surrounding the sections of navel oranges is not objectionable.

BAKED APPLE

6 apples 1 t. lemon juice if desired
1/2 to 3/4 c. granulated sugar; or half brown and half granulated.

Wash and core the apples, leaving the blossoms end to hold the filling. Cover the bottom of the pan or baking dish with one inch of water. Put apples in, fill cavities with sugar, and add a few drops of lemon juice if desired. Bake in a moderate oven until soft, or about 30-40 minutes.

APPLE SAUCE

4 apples 1/4 to 1/2 c. sugar
1 or 2 slices lemon

Wash, pare, and quarter apples. Place in a pan with lemon and cloves, and almost cover with water. Cook until soft. Add sugar and continue heating until sugar dissolves. Remove lemon and cloves and serve hot or cold.

VARIATIONS.—Cinnamon candy may be used for coloring. Whole apples may be washed, pared, cored, and cooked in a sirup until tender. One part sugar to two parts water is used for the sirup. Apples either whole, halved, or quartered prepared in this way are often served with roast pork and are called apple compote.

DRIED FRUIT

Wash carefully through several waters, always lifting the fruit out of the water. If very dirty, submerge fruit in cold water and let it stand 15 minutes before washing. Soak several hours or over night in cold water enough to cover. Dried apples are an exception because they take up water more readily than other dried fruits, and soaking darkens them. Cook slowly in the same water over the direct heat or in the double boiler until tender. Add sugar if necessary and heat a few minutes longer to dissolve the sugar. Most dried fruits are sweet and need little sugar. From one-fourth to one-half cup for each pound of fruit is usually enough. Prunes, raisins, and figs are delicious cooked without sugar. Well soaked dried fruits may be served without cooking. Many people have acquired the taste for preserves and sweet sauces and physicians often advise reducing the amount of sugar. Would it not be wise for us to learn to like less sugar before we develop some disease which makes it necessary for us to get along without it? Try using a little less each time you prepare a fruit sauce and see if the family does not gradually learn to like it as well. You may be surprised to find that you taste more of the natural fruit flavor as the amount of sugar is decreased.

Fresh, dried, and canned fruits are all used in the preparation of salads and desserts and there are many delicious ways of serving them. Besides using our club recipes, won't it be interesting to try some of mother's favorites and also be on the look-out for good recipes in cook books and magazines? Mistakes are often made in printed recipes so we cannot depend on all of them that we find. As we go on with our cooking project we will learn many things which will help us judge recipes and enable us to select the best ones.

FRUIT BEVERAGES

A glass of lemonade on a hot day is not only refreshing but healthful because lemons contain two of the important vitamins. Fruit beverages offer additional attractive ways of serving fruit. There are many delicious combinations of fruit juices. It is possible to have them more often if we plan ahead. Think about them when you are helping mother with the canning because there are often left-over juices which can be saved for fruit drinks in the winter time.

LEMONADE

Wash and wipe the lemons. If the lemon peel is to be used it should be washed carefully. Cut the lemons in halves, remove seeds, squeeze out the juice. Add as much sugar as juice and stir until dissolved. This may be placed in glass jars, which make an easy way to carry it to a picnic. When ready to serve, add about 4 times as much cold water and taste before serving to test the strength. If too strong add water enough to make it just right. Club girls should be able to estimate the number of lemons required to serve a certain number of people. The following amounts for one serving will help you to do this:

Individual recipe.—One good-sized lemon contains about one-fourth cup or four tablespoons of juice. Two tablespoons of juice are often used for one glass of lemonade. Mix 2 tablespoons of juice and 1 tablepoon of sugar; or half brown and half granulated. If one is not sure of the ice supply it is best to cool the punch by placing the container on ice or in a refrigerator rather than by adding ice to the punch. If you have a good supply of ice the punch should be made on the day it is to be served, and if one is to use lemonade in a gallon of punch it is best to use 3 cups of juice in a gallon. This is a very general recipe because it does not state the kind of fruit which should be used. We find by figuring from the individual recipe that 2 cups of lemon juice is used with 1 gallon of water in making lemonade. The reason that we use 3 to 5 cups of fruit juice in a gallon of punch is that at least half of this amount is thin fruit juice such as we find in most canned fruits. Alter the amount of sugar according to the sweetness of the fruit juices.

HOWS AND WHYS FOR YOUNG COOKS
Problem II—Milk—Eggs—Courtesies

After scoring our food habits by the Food Selection score card and using the standard set by this score card for planning meals, the next step is to play the game. Seven points which we may call rules of the food habit game are given under the topic, “Menu Making”. Are you playing the Food Habit game every day?

Milk

A little study of the composition and food value of milk helps us to realize how important it is in the daily diet.

- **Protein 3.3%**—The curd of cheese is milk protein and is called casein. It helps to build muscles, blood, and other parts of our bodies. Milk protein is good for everybody and especially for boys and girls because their bodies grow so rapidly.

- **Vitamins A, B, and G.**—Milk is an excellent source of vitamins A and G. It is a good source of B and sometimes contains a little C. Vitamins are necessary for growth.

- **Mineral nutrients 0.7%**—Milk is an excellent source of calcium or lime. Between two and three cupfuls of milk contain the amount of calcium needed by the body each day. Phosphorus and iron are two other important minerals which the body needs. Milk is a good source of phosphorus but a poor source of iron, so we need to get our iron from green vegetables, eggs, or meat. Mineral nutrients are used especially in the hard tissues of the body as the bones and teeth. These are being constantly worn away and must be replaced.

- **Fat 4%**—The fat of milk is very easily digested because of its finely divided form and its low melting point. Vitamin A, often called “fat soluble A” is found in the fat of milk.

- **Carbohydrate 5%**—Milk sugar is the carbohydrate in milk. It is not very sweet and is easily digested. The fat and carbohydrate in milk act as fuel to our bodies, for they give energy for work and play.

- **Water 87%**—While water is not properly a food it is just as important in keeping the body in good order as any of the food materials.

**Care of Milk**

Have you ever seen a child take a taste of milk and then leave the rest in his glass? Perhaps its good taste had been spoiled by careless handling. Milk and butter absorb odors easily. They should not be placed near foods of strong odor. The cows and barns need to be kept clean and free from disease. Milk may carry disease germs unless it is handled under sanitary conditions. In an up-to-date dairy all utensils are carefully sterilized. We may not have the same equipment in our homes but we can use plenty of boiling water and sunlight on milk utensils. Flies carry filth and disease germs and should never be allowed around milk dishes.

Here are a few rules for the care of milk in the home, some of which apply to people who buy their milk. It will be interesting to add other rules to this list when you discuss them in the club meeting.

- Keep milk clean, covered, and cool.
- Place milk in the coldest part of the refrigerator or in a place below 50°F.
- Keep the refrigerator clean.
- Keep milk and butter away from foods of strong odor.
- Buy milk in bottles.
- Wash the mouth of the milk bottle before pouring the milk. Keep milk in the bottle until it is used.
- Do not mix new and old milk.

**Learning to Like Milk**

People who have plenty of milk in their homes do not always use as much as they should to keep them in the best of health. How can we plan so that not only ourselves but all members of our family will use as much as they need? Young children follow the example of older members of the family, so one of the best ways to get them to eat proper foods is to eat them ourselves. The problem is quite simple if we drink a glass of milk at each meal because it is easy to get the fourth cup in other foods. Besides drinking milk as a beverage we can use it with fruit, cereals, toast, vegetables, and also in making various sauces, gravies, soups, and desserts. In cold weather we often enjoy a hot drink for breakfast. Hot milk may be served in a cup or in a bowl to be eaten with buttered toast. Occasionally, cocoa or chocolate made with milk is an acceptable hot drink for boys and girls.

These suggestions will help us to teach children to enjoy milk:

1. Drink milk through a straw or macaroni.
2. Give the child a separate small pitcher and cup.
3. Use a bowl with a story picture in the bottom.
4. Paste pictures on the bottom of the glass.
5. Break bread into the milk.
6. Flavor the milk with vanilla and honey, fruit juices, cocoa, chocolate, or eggs. Be careful not to add too much sugar.

Children who do not drink as much milk as they need can often be encouraged to do so if some flavor which they like is added. Perhaps you have younger brothers or sisters who need encouragement in this way.

**Milk Products and Milk Cookery**

Skim milk and buttermilk have all the food value of milk except the fat and the vitamin A in the fat. Whey contains some of the food value of milk. After the protein and fat have been removed, the carbohydrate, minerals, water, and some of the vitamins B and G are left. Cream contains from 20 to 40 per cent of fat. It contains the other food materials found in milk but in a much smaller proportion.

Milk is easily scorched and boils over quickly so it is best to heat it in a double boiler. The double boiler saves food often burned or stuck to
the pan. It saves steps back and forth to the stove, and also time in watching the cooking of foods. One can improvise a double boiler by using two sauce pans. The smaller one is placed so that it dips into the water but does not touch the bottom of the other pan. In this way the milk is heated by water which surrounds the pan instead of directly by the flame.

If the outer part of the double boiler boils dry, the product in the inner part is likely to boil or burn. We can tell when milk is scalded by the scum which forms over the top and by the little, beadlike bubbles which form at the edge of the milk.

Whole milk, skim milk, buttermilk, and lactone are all nourishing beverages. Buttermilk which we have in our homes after churning contains little fat, but that made by adding the lactic acid bacteria, if made with whole milk, contains all of the cream which is in the milk.

Have you ever tried to alter the flavor of milk? Malted milk powder, eggs, honey, fruit juices, and various flavorings are used to add a pleasing variety to our daily beverage.

Cocoa

1 1/2 to 2 T. cocoa
2 T. sugar
3 c. milk
Mix the sugar, salt, and cocoa. Then add the boiling water and boil 3 minutes. Add the milk and when it is hot, beat with a dovecr egg beater until a froth forms. This helps to prevent a scum from forming over the top of the cocoa. You will notice that there are 4 cups or 1 quart of liquid in this recipe. Four cupfuls will make at least 6 servings. As a rule, if we figure one full cup per person when we estimate the amount required for a certain number of people there is enough for those who want a second serving.

When cocoa is served at a party or some special occasion we may want it sweeter. If so, substitute 3 T. of sugar in this recipe. A garnish of whipped cream or marshmallows makes the cocoa more attractive and marshmallows add sweetness. After it is poured into the serving cup, add a spoonful of whipped cream or one or two marshmallows.

Suggestions for Whipping Cream

Use heavy cream from 12 to 24 hours old.

Have it very cold.

In warm weather, place the cream in a granite or enamel pan and surround the pan with ice water while beating. Earthenware or glass does not allow the heat to pass off as rapidly.

Milk Shake or Egg Nog

1 c. milk
1 T. sugar
½ to 1 egg
½ t. vanilla or 1 T. orange juice (a few grains of nutmeg may be used if desired with vanilla)

Flavoring may be suited to the taste. Shake thoroughly in a container with tight lid; or beat egg, add other ingredients, and stir well.

Variations.—Beat yolk and white of egg separately. Add sugar, milk, and flavoring to the egg yolk. Add beaten white, stir well, and serve.

For Fruit Egg Nog omit milk and add fruit juice diluted with water to taste. The amount of sugar may be varied according to the sweetness of the fruit juice. Other flavoring is usually omitted for fruit egg nog.

Use ½ to 1 T. of honey instead of sugar.

Cream Soups

An attractive way of serving two important foods, vegetables and milk, is to combine them in the making of cream soups. It is interesting to work out a general recipe and then one may vary the soup according to the materials on hand.

Let us call this our foundation cream soup recipe:

2 c. cooked vegetable (may be mashed, diced, or left whole as in the case of peas and corn)
6 c. milk or part milk and part vegetable water
1 slice onion finely chopped or scraped
3 T. flour
3 T. butter
1 to 2 t. salt

A good proportion of vegetable to milk for a cream soup is 1 cup of cooked vegetable to 2 cups of milk. Briefly stated, our method for making cream soups is to combine the vegetable and white sauce, then season to taste.

Variations.—Each time you make a cream soup you will work out some variation of this recipe. The methods for making white sauce follow, but very good cream soups may be made without the use of flour as a thickening agent. Whole cooked cereal such as barley and rice or mush made from the ground cereals, may be used instead of flour. The amount of such cereal used varies with the vegetable and personal taste. Starchy vegetables require less thickening. For example, the mashed potatoes used in making cream of potato soup make it thick enough to suit some people. Thus we may say in general for soups which need other thickening, from 1 to 2 cups of cooked cereal may be added to our foundation recipe when the flour is omitted. Left-over cereal may be used but when cold it is stiff and needs to be finely divided by mashing and by adding the hot liquid to it gradually. If this is done, the cereal will not appear in the soup as lumps.

A more simple variation is to use the recipe as it is, omitting the flour. This makes a thick soup.

Many variations may be worked out with the seasoning of soups. Celery adds a nice flavor to many vegetable soups. Parts of the stalk which are not so nice for serving may be used, or the finely chopped leaves. It is a good plan to dry the celery leaves and crush them. In this form they are ready for use at any time. Flavored milk may be used instead of water.

The amount of salt needed in a cream soup varies with the amount which has been used in cooking the vegetable. The general proportion is one teaspoonful of salt to a quart of liquid but if a cooked salted vegetable is used very little may be needed. It is a good plan to taste the soup and then decide how much to use. Remember, it is better to add too little than too much.

If you should want to make cream of tomato soup ask your mother how she makes it. It is more difficult because tomatoes contain a strong acid which must be partly neutralized or destroyed before they are added to the white sauce, or the milk will curdle.

<table>
<thead>
<tr>
<th>Kind</th>
<th>Thin</th>
<th>Medium</th>
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</thead>
<tbody>
<tr>
<td>Fat</td>
<td>1/2 t.</td>
<td>1 1/2 t.</td>
</tr>
<tr>
<td>Flour</td>
<td>1 1/2 T.</td>
<td>2 T.</td>
</tr>
<tr>
<td>Milk</td>
<td>1 1/2 to 2 T.</td>
<td>2 T.</td>
</tr>
<tr>
<td>Salt</td>
<td>1 c.</td>
<td>1 c.</td>
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</tbody>
</table>

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The sauce-pan method saves time. The double boiler avoids scorching and this is an advantage for large quantities.

Methods of Combining White Sauce

Method 1.—Melt fat in a sauce pan over a low flame; add the flour and salt; stir with the fat until thoroughly combined. Remove from the fire; add a small amount of milk and stir until the mixture is smooth. Add the rest of the milk slowly, stirring while it is being added. Return to the fire and cook slowly until the sauce boils and until the taste of raw flour disappears. The mixture must be stirred constantly to prevent lumping and scorching.

Method 2.—Melt fat in a sauce pan over a low flame; add the flour and salt; stir with the fat until thoroughly combined. Remove from the fire; add a small amount of milk and stir until the mixture is smooth. Add the rest of the milk slowly, stirring while it is being added. Return to the fire and cook slowly until the sauce boils and until the taste of raw flour disappears. The mixture must be stirred constantly to prevent lumping and scorching.

Method 3.—Melt fat in a sauce pan over a low flame; add the flour and salt; stir with the fat until thoroughly combined. Remove from the fire; add a small amount of milk and stir until the mixture is smooth. Add the rest of the milk slowly, stirring while it is being added. Return to the fire and cook slowly until the sauce boils and until the taste of raw flour disappears. The mixture must be stirred constantly to prevent lumping and scorching.

Method 4.—Melt fat in a sauce pan over a low flame; add the flour and salt; stir with the fat until thoroughly combined. Remove from the fire; add a small amount of milk and stir until the mixture is smooth. Add the rest of the milk slowly, stirring while it is being added. Return to the fire and cook slowly until the sauce boils and until the taste of raw flour disappears. The mixture must be stirred constantly to prevent lumping and scorching.
Method 2.—Heat milk in the inner part of the double boiler. Cream the fat in a small bowl, add the flour, and cream the fat and flour to a smooth paste. Add this to the heated milk and stir until the mixture is smooth and thickened. Cook until the taste of raw flour disappears, or about 15 minutes.

Method 3.—Mix flour with ¼ cup of cold liquid and stir until smooth. Add to the remainder of the liquid, which has been heated, and cook over direct heat or in a double boiler, stirring constantly until it thickens. Heated liquid is added to save time and stirring. Add fat and salt.

EGGS AND THEIR FOOD VALUE

Nature has given us evidence that eggs are useful for building body tissue. With no other food the baby chick is developed so well that as a double boiler, stirring constantly until it thickens. Heated liquid is added to save time and stirring. With no other food the baby chick is developed so well that as soon as it is hatched it has strength enough to run about and scratch for its food. Eggs are rich in protein, minerals, and vitamins, all of which are needed in the growth and repair of muscle, bone, and blood. This is the reason that eggs should be included in the diet of growing boys and girls as well as convalescents and undernourished persons. The composition of the whole egg is as follows:

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<tr>
<th></th>
<th>Water</th>
<th>Protein</th>
<th>Fat</th>
<th>Minerals</th>
<th>Vitamins</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>72-75%</td>
<td>12-14%</td>
<td>10-12%</td>
<td>1%</td>
<td>A, B, D, and G</td>
</tr>
</tbody>
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In comparing the white and yolk of the egg we find that the yolk is more valuable in several respects than the white. All of the fat and nearly all of the vitamins and minerals are in the yolk. The white of the egg is approximately one-eighth protein and seven-eighths water. The yolk is about one-third fat, one-sixth protein, and one-half water.

Protein.—The protein in the white is largely albumen. Like the proteins of milk, egg proteins are complete proteins, which means that they are efficient for body building.

Mineral nutrients.—Eggs are rich in three important minerals, phosphorus, calcium, and especially iron, and they occur in egg yolk in a form that is very easily used by the body.

Fat.—The fat of egg yolk, like that of milk, is in an emulsified form which makes it easily digested.

Vitamins.—Egg yolk is an excellent source of vitamins A and G and good source of vitamin B. It also contains some vitamin D, which is necessary to prevent rickets, a bone disease prevalent among children.

Eggs should be clean. As soon as gathered, put them in a cool place. Unless the shell is dirty, do not wash the eggs, as there is a natural coating that protects the pores to some degree. Cold storage prevents the growth of bacteria which enter the egg through the porous shell. Egg yolks, if unbroken, may be covered with water and kept several days in the refrigerator. Egg whites will keep for several days in a covered glass if no water is added. Fresh eggs have the following qualities:

Shell—dull, strong, and slightly rough.
White—clear and firm.
Yolk—thick and yellow, upstanding, surrounded by a tough membrane.

In addition, a good egg will have a good odor and flavor.

Method 2.—Use method 2 for soft-cooked eggs and increase the time to 30 minutes.

Method 3.—Put eggs in a saucepan and cover with cold water. Place over moderate heat, bring to the boiling point, and serve. This method is not as reliable as the other two because the length of time which it takes to bring the water to boiling varies depending upon the degree of coagulation desired.

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COOKING EGGS

Heat coagulates the protein of eggs, meat, and fish. Albumen coagulates at a temperature below the boiling point of water. Boiling temperature toughens the coagulated protein of eggs so that a longer time is required for digestion. When eggs are hard-cooked in water below the boiling point, the white becomes firm, but not tough, and the yolk mealy. We say then that eggs should be soft-cooked or hard-cooked rather than soft-boiled or hard-boiled.

The time required for cooking varies with conditions. For example, the amount and temperature of the water, the size and shape of the pan used, and the temperature of the eggs before cooking affect the time of cooking. Allow one pint of boiling water for the first egg and one cup for each additional egg. Use a pan with fitted cover which is small enough so that this amount of water will cover the eggs. In case a number of eggs are cooked at one time and they are very cold, a longer time is necessary. When cooking eggs in the shell for a meal, the surest way to have them just right is to break one when you think they are ready and if they need more cooking the others may be left in the water for a longer time.

Method 1.—Place eggs in a saucepan and add enough boiling water to cover them as explained above. Cover the pan, remove from the fire, and let stand 5 to 8 minutes, depending upon the degree of coagulation desired.

Method 2.—Put eggs into the top part of double boiler and add enough boiling water to cover them as explained above. Pour boiling water in the outer part of the double boiler. Cover and let stand off the stove for five minutes.

Method 3.—Put eggs in a sauce pan and cover with cold water. Place over moderate heat, bring to the boiling point, and serve. This method is not as reliable as the other two because the length of time which it takes to bring the water to boiling varies with the amount of heat applied and it may take so long that the eggs will be hard-cooked.

Method 1.—Use method 1 for soft-cooked eggs and let the eggs remain in the water 45 minutes. For a firmer egg place the sauce pan where the water will keep hot but not boil.

Method 2.—Use method 2 for soft-cooked eggs and increase the time to 30 minutes.

Method 3.—Use method 3 for soft-cooked eggs. Remove from fire when water reaches the boiling point, cover and allow the eggs to remain in the water for 20 minutes.

POACHED EGGS

Butter the bottom of a shallow pan. Add enough boiling water to cover the eggs. For each pint of water, add ½ teaspoon salt and ½ tablespoon vinegar. Slip eggs, one at a time, into pan. Cover the pan and keep over very low heat so that the water does not boil. Let stand until the white is coagulated and a film covers the yolk. This takes from 3 to 10 minutes, according to the degree of firmness desired. Take up with a greased skimmer, drain and place on slices of toast moistened slightly with hot water, milk or cream. The toast should be made beforehand if there is not time to make it while the eggs are poaching because it is harmed less by standing than are the eggs.

Variations.—Garnish with small sprigs of parsley. Cut the toast round, and use greased muffin rings to hold the eggs in shape while poaching.
SCRAMBLED EGGS

4 eggs ¾ cup milk ¼ to ½ t. salt 2 T. butter

Beat eggs slightly. Add salt and milk. Melt the butter in a double boiler, add the eggs and stir occasionally until the mass sets. Keep the water in the lower part of the double boiler below boiling point. Scrambled eggs may be cooked directly over the fire if a low temperature is used. Scrape from bottom of pan as the mixture cooks. Cook only until creamy, because the eggs continue cooking after they are taken from the stove.

Variations.—Add a little chopped cooked bacon or ham, or chopped parsley. Grated cheese may be added when the eggs begin to thicken, using about one tablespoon of cheese to each egg.

PUFFY OMELET

1 egg ¼ t. salt ½ t. butter
1 T. milk Speck of pepper

Beat the yolk, add milk and seasonings. Beat the white of egg until stiff and mix with the yolk in such a way that as little air as possible is allowed to escape from the beaten whites. This method of mixing is called cutting and folding. To cut and fold egg whites and yolks, turn the beaten whites into the yolk mixture, then with a spoon edgewise, cut the ingredients, lift them, and turn them over. Repeat until the white and yolk are mixed.

Put the butter in a frying pan or omelet pan. Heat the pan until the butter melts and see that the bottom and sides of pan are buttered. Cook over low heat occasionally turning the pan so that the omelet may brown evenly. When the omelet is set and delicately browned underneath place it in a hot oven for a few minutes to dry the top. If left in the oven too long, the heat toughens it. An omelet is done if it does not cling to the fingers when touched.

Loosen the bottom of the omelet with a spatula or knife, then place the spatula under the half near the handle and fold toward the right so that the browned surface forms both the bottom and top of the omelet. Serve at once.

Allow one egg to each person. It is best for a beginner to make a small omelet because a large egg is difficult to handle. A plain or creamy omelet is made in a similar way, only it is not as light because the whole egg is beaten. It does not need to be placed in the oven because it is not as thick. The plain omelet is something like scrambled egg.

Variations.—For cheese omelet, sprinkle grated cheese over omelet just before serving, using 1 T. to each egg. For bacon omelet, fold into the uncooked mixture crisp bacon broken in pieces. For jelly omelet, omit pepper and add 1 teaspoon sugar for each egg. Before folding omelet, spread with jelly, jam, or marmalade. Fold, turn, and sprinkle with powdered sugar.

CUSTARDS AND MILK PUDDINGS

Custards are combinations of milk and egg sweetened and flavored. Since the eggs are used as thickening agents they should be beaten only slightly, just enough so they will mix with the milk. Cook at a low temperature because they contain a large amount of protein. Use 1 cup of milk for two servings when making a custard.

CUSTARDS

Scald milk. Break eggs in a bowl, and beat slightly, adding the sugar and salt. Add scalding milk slowly to the egg mixture, stirring constantly. Since we have learned that eggs cook at a low temperature, what would happen if we added the egg mixture slowly to the scalded milk?

For soft or boiled custard, cook mixture in a double boiler and stir constantly until it thickens and forms a coating over the bowl of the stirring spoon. Eggs cook so quickly, it takes only a few minutes when the milk is scalding hot. Remove the top part of the double boiler from the lower part to stop the cooking and set aside to cool. Since this is a soft custard the flavoring may be added after it has cooled.

If a custard is cooked just right, the egg is really soft-cooked and the custard has a creamy appearance. When a custard is overcooked, the egg is hard-cooked and we may say that the custard has separated or curdled. It is usually possible to remedy a curdled soft custard by cooling, then beating it with a wheel egg beater. It may be cooled quickly by placing the inner part of the double boiler in cold water.

For baked custard, pour the mixture into cups or a baking dish and place them in a pan of hot water in a slow oven. Surrounding the baking dish with water helps to keep the oven temperature lower. To test a baked custard, insert a knife. If it comes out clean, the custard is done. Remove from the oven at once to avoid overcooking.

CORN STARCH PUDDING

Mix the sugar and cornstarch thoroughly to separate the particles of starch and help to prevent it from forming lumps. Combine with hot milk, cover, and cook over hot water 15 minutes, stirring occasionally. Stir slowly into beaten egg, and cook 1 minute in the double boiler, stirring constantly. Add flavoring just before pouring into mold.

TAPOICA CREAM, RICE, OR BREAD PUDDING

Cook tapioca in milk in the double boiler until transparent (about 10 min.). Scald cooked rice or bread crumbs with the milk. Four slowly over egg mixture and proceed as for custard. If cooked as soft custard, the egg white is beaten stiff and folded in at the last to give lightness. The heat of the pudding is sufficient to cook the egg white. Add butter just before removing from fire.

Variations.—A family often becomes tired of a recipe if it is served frequently in the same way, so here are several variations which may be used with one or more of these puddings. Which variation do you think would be better with which puddings? Ask your mother to suggest variations and be on the look-out for additional ones; then try those that appeal to you most.

1. Cut 1 ounce of chocolate (1 square) into small pieces and put in the upper part of the double boiler. When melted, add the milk and beat with a Dover egg beater to blend thoroughly. Then proceed as before.
2. Serve with fresh or dried fruits, jellies, or jams. Some fresh fruits may need to stand with sugar or honey on them before they are served with the pudding.
3. If your family likes coconut, add a small amount of grated coconut. For puddings cooked in a double boiler add the coconut just before pouring into the serving dish or molds.
4. Serve with whipped cream or honey meringue.

HONEY MERINGUE

Place one egg white and one-fourth cup of honey in a bowl. Beat with a Dover egg beater until it is stiff enough to stand in peaks.

HONEY BUTTER MERINGUE

Fold one cup of meringue into a tablespoon of melted butter. Always stir the meringue into the melted butter and not the butter into the meringue. This should have the texture of whipped cream.
SIMPLE COURTESIES FOR THE HOME TABLE

Why not make meal time as interesting and pleasant as possible? An attractive, well-set table is a background for table courtesies. Add others to this list.

Eat slowly. Rapid eating is often harmful to health.

Sit up straight with feet flat on the floor. This gives one poise.

Lay the teaspoon in the saucer when not in use. If left in the cup it may cause an accident. This also applies to other dishes. The soup spoon is dipped away from one and sipped quietly from the side.

Keep the lips closed while chewing. One should not try to talk with food in the mouth. Take small bites. Chew the food thoroughly.

Take sidewalks as a guide to your steps. One may not eat "in the street".

Train yourself to eat all foods that agree with you. One may learn to like a food.

Keep the elbows close to the body and off the table. Reaching for food or reaching in front of anyone should be avoided.

If it is necessary to leave the table, ask mother if you may be excused.

Keep everything about your plate as neat as possible. Butter only small pieces of bread, not a whole slice.

Food is accepted with "Yes, thank you" or "If you please" and refused with "No, thank you".

Set a good example. Do not correct others nor criticize the food.

Use a fork for vegetables whenever possible.

The fork is used for cutting and carrying foods to the mouth. When it is difficult to cut head lettuce, the fork may be used.

The knife is used to cut food, but never to carry food to the mouth. When the knife is not in use, lay it on the edge of the plate. The handle should rest on the table cloth. The fork and spoon should be held with the hand under the handle when carrying food to the mouth.

The knife and fork are placed across the plate, a little to one side, when the plate is passed for another helping. When the course is finished they should be left on the plate.

Food is accepted with "Thank you" or "If you please" and refused with "No, thank you".

The napkin is removed from the table immediately following grace, if said; otherwise it may be removed as soon as all are comfortably seated.

When the meal is finished, fold the napkin and place at the left of the plate. Take small bites. Chew the food thoroughly.

Be careful in passing any dish that the fingers do not touch the inside of the dish or the food.

Bread and crackers should not be soaked in soup or beverage.

Cough or sneeze to one side at the table, always using a handkerchief.

Toothpicks should never be used in the presence of others.

Be on time so that all may sit down to the table together.

COMPOSITION AND FOOD VALUE OF CEREALS

All cereals are the seeds of grains. If you have studied botany you have probably seen the different parts of a grain under the microscope. Besides the outer husk each kernel is made up of three parts:

- The bran lies next to the husk and consists of several layers of fiber or cellulose. It also contains mineral salts, vitamins, and some protein. The whole grain has five coats or layers of bran.
- The endosperm, or starchy part of the grain, is the largest portion and contains chiefly starch and protein.
- The germ, or embryo, from which the grain sprouts, contains fat, some carbohydrate, proteins, mineral matter, and vitamins.

Milling removes much of the cellulose, mineral matter, vitamins, fat, and some protein so that many of the refined cereals consist largely of starch.

We learned in Problem I that one of the uses of food is to produce energy or power for our activities and also to produce heat to keep us warm. The calorie or unit for measuring heat produced in the body by food may be compared to the inch which is a common unit for measuring many things. Considering that the daily energy requirement of the average man is 3,000 calories, each 100 calories of food represent 1/30 of the day's requirement. Nutrition experts have called 1/30 of the day's requirement a "share". Therefore, 100 calories would be 1 caloric share. The term "share" is also applied to 1/30 of each of the other dietary essentials—protein, calcium, iron, and phosphorus.

The following figures give the number of shares of protein, calcium, phosphorus, and iron in 1 ounce of graham flour and 1 ounce of refined wheat flour. They show that the graham flour contains about twice as much calcium and about four times as much phosphorus and iron as the white or refined wheat flour.

<table>
<thead>
<tr>
<th>Weight</th>
<th>Calories</th>
<th>Protein</th>
<th>Calcium</th>
<th>Phosphorus</th>
<th>Iron</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 oz.</td>
<td>100</td>
<td>1.3</td>
<td>0.3</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>1 oz.</td>
<td>100</td>
<td>1.5</td>
<td>0.5</td>
<td>2.3</td>
<td>2.0</td>
</tr>
</tbody>
</table>

All cereals are excellent sources of energy and cooked cereals are perhaps our cheapest source of energy. Strained cereals are given to children...
at the age of six months, which shows they are easily digested. In general, we may say that the whole cereals have the following advantages over refined cereals: they give more vitamin B, iron, and phosphorus, also more bulk or cellulose.

Would you consider a meal well planned if it included bread, baked potato, fried mush, and cooked rice? You will see by looking up the composition of these foods that they all contain a large amount of carbohydrates, and so this meal is too starchy and does not follow the standard set by the food selection score card.

BUYING CEREALS

We buy cereals in three different forms: uncooked, partially cooked, and cooked. The rolled grains, for example rolled oats, are often partly cooked by steam, so they do not require as much cooking in our homes. Corn flakes, puffed rice, and shredded wheat are examples of the thoroughly cooked or ready-to-serve breakfast cereals. Which do you think is most economical to buy—the cooked or uncooked cereal? The weight is marked on the package and in order to compare them we need to consider weight as well as price. How does the price per pound of uncooked rice and puffed rice compare? Make a list of the cereals you can buy at the grocery store. It will be interesting for several club members if each will take a different cereal and report on it in the club meeting.

Some cereals may be purchased in bulk as well as in packages. One advantage in bulk buying is that they are cheaper but we should also consider how they are handled. If they are not kept covered in a tight container they may not be as clean as the package cereals. Because insects spoil cereals quickly, it is better to buy a small quantity at a time, especially in hot weather.

COOKING CEREALS

We cook cereals to improve the flavor, to soften the cellulose, and to make them more digestible. Lumpy, half-cooked cereal is not palatable and proper cooking should make it both attractive and palatable. In considering the methods used we must remember that cereals are chiefly starch. The starch is in a dry, granular form and must be cooked with water. While cooking, the starch granules increase in size because of the absorption of water. It is this absorption of water that causes starch to thicken as it cooks. Thorough cooking softens the cellulose so that it is less irritating to the digestive tract.

As starch is digested in the body it is changed to simple sugars. Cooking starts this change. Have you noticed that a well cooked cereal is slightly sweeter than one which has been cooked only a short time?

Cereals are cooked in boiling salted water or in hot milk. The amount of salt varies with individual taste but one to one and one-half teaspoons to each quart of liquid is a safe general rule. When adding cereal to boiling water care must be taken to prevent lumping.

Ways to prevent lumping.—Sprinkle granular and flaked cereals slowly into boiling water. The movement of the boiling water separates the grains and flakes. Fine cereals which form lumps readily may be mixed with cold water and poured into boiling water. Stir constantly, while adding cereal and while cooking over the flame. Use a fork for stirring coarse cereals.

Method of cooking.—Cook in the upper part of a double boiler over an open flame or on top of the stove for one to two minutes or until the cereal starts to thicken; then finish cooking over hot water by placing the inner part into the outer part of the double boiler.

Cooking with milk.—Substitute milk for a part or all of the water used for cooking the cereal. In case all milk is used it will be better to do all of the cooking over hot water, and cook about one-third longer.

The quantity of cereal and water required to give approximately 2½ cups of cooked cereal is given in the table below:

<table>
<thead>
<tr>
<th>Kind</th>
<th>Examples</th>
<th>Cereal needed</th>
<th>Amount water for cooking period of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Granular, from inside grain</td>
<td>Farina</td>
<td>½ c.</td>
<td>20 min. 60 min.</td>
</tr>
<tr>
<td></td>
<td>Cream of Wheat</td>
<td>½ c.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yellow corn meal</td>
<td>½ c.</td>
<td></td>
</tr>
<tr>
<td>Rolled or flaked</td>
<td>Quick-cooking oats</td>
<td>1½ c.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rolled Oats</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>New Pettijohns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Granular, from whole grain</td>
<td>Wheatena</td>
<td>⅔ c.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ralston’s Whole Wheat</td>
<td>⅔ c.</td>
<td></td>
</tr>
<tr>
<td>Cracked wheat</td>
<td>Heinz Breakfast Wheat</td>
<td>⅔ c.</td>
<td></td>
</tr>
</tbody>
</table>

BOILING RICE

Add one cup of washed rice slowly to about three cups of boiling, salted water, so as not to check the boiling. Boil until the grains are tender with no dry starch in the center. This usually takes about 20 minutes for white rice. As it boils the rice grains are tossed around, and this prevents sticking. Pour the rice into a colander or strainer to drain. Save the rice water, as it is a wasteful method not to use it. What are some of the ways in which it may be used? Pour clean hot water through the rice to rinse the starch paste from the grains so they will not stick together. Drain well. Some people like the appearance of rice better when the grains are separate. There is no dietetic reason for this method. The time for cooking may be shortened if rice is soaked in water before cooking. Brown (unpolished) rice requires longer cooking than white (polished) rice.

METHOD OF SERVING CEREALS

With milk or thin cream.—Whole milk is preferable for children and invalids because it is easier to digest. The use of a large amount of sugar should be discouraged for several reasons. It obscures the milder
flavor of cereals and in quantities is irritating to the digestive tract. Putting sugar on cereals to get the cereal eaten may establish the sugar habit instead of the cereal habit.  

With butter.—Butter served on hot cereals is a pleasing variation.

With stewed, fresh, or dried fruit.—Dates, figs, and raisins are the dried fruit most frequently used. They may be added to the cereal after the first ten minutes of cooking or stirred in at the end of the cooking. Berries, sliced bananas, or peaches are often served with either cooked or prepared cereals.

Left-over cereal.—Some of the uses for left-over cereal are to thicken soups, to bind croquettes, to substitute as part of the flour in quick breads, and to serve with a vegetable or as pudding. Cereal made with milk, which has dried fruits added, is especially nice for use as a pudding.

Prepared cereals are improved by placing in a moderate oven before serving. It requires only a short time to make them crisp. Watch closely to prevent scorching.

QUICK BREADS

By quick breads we mean breads such as muffins, corn bread, and biscuits, which are made light by some leavening other than yeast. What happens when a speck of soda is added to a tablespoon of sour milk? Try it and see. Baking powder is made of soda and an acid substance with some starch added to keep the soda and acid separated. When moistened, baking powder forms bubbles of carbon dioxide gas just as do soda and sour milk. When a batter or dough containing this gas is heated the bubbles expand and make the mixture light.

If you are privileged to take home economics you will learn more about the wonderful processes that take place in cooking. The more we understand about the “whys” of cooking, the more we will enjoy our work, so let us learn all we can while we are in the cooking club. We can also learn many things from people who have had more experience and training, as our mothers, club leaders, and teachers.

BATTERS AND DOUGHS FOR QUICK BREADS

Sometimes we hear cooks talk about batters and sometimes about doughs. Do you know the difference between the two? They are both mixtures of flour and a liquid, but the proportion varies.

Batters are thin enough to beat. They are divided into two groups—pour and drop batters.

"Pour batters" are thin enough to pour. Griddle-cake batter with the proportion of one cup liquid to one and one-half cups flour is an example.

"Drop batters" are thick enough so that most of the batter drops from the mixing spoon at once. Muffin batter with the proportion of one cup liquid to about two cups flour is an example.

Doughs are stiff enough to be handled on a board. They are divided into two groups, soft and stiff doughs.

"Soft doughs" have the proportion of one cup liquid to about three cups flour. Example: baking powder biscuits.

"Stiff doughs" have the proportion of one cup liquid to more than three cups of flour. Example: yeast bread dough.

These terms are general. For example, we may have a thin drop batter or a thick drop batter, a medium stiff dough, such as yeast bread, or a very stiff dough such as pastry. However, knowing these proportions should help us to be more independent of recipes and to be able to judge recipes that we find in various places.

GENERAL DIRECTIONS

Preliminary.—Start oven in plenty of time. Collect utensils and ingredients. Prepare pans by greasing or sprinkling with flour as required. An easy way to grease the pans for baking is to place a piece of soft paper over the fingers. Apply grease with the paper and then throw it away. Clean, oiled paper may be cut and kept in a convenient place for this purpose. A brush is convenient but needs to be boiled in water containing a little soda often enough to prevent the fat from becoming rancid.

Measuring.—Sift flour before measuring. See Problem I, page 8. Baking powder or soda should be stirred in the can to make it lighter before measuring. If the soda is lumpy, crush the lumps so that you can measure it accurately. Save dishwashing by measuring dry ingredients first; then use the same cup for liquids. We talked about forming good food habits in Problem II. Let us remember that we are forming habits of work while we are cooking. Why is the habit of measuring accurately a good one? It pays because we will have more uniform results and this prevents worry and waste. If we measure accurately when we first begin to cook, it will become a habit and take no longer than "just guessing."

Mixing.—A general rule for quick breads is to mix and sift the dry ingredients. However, soda is an exception to this rule. A little water is mixed with the soda and then it is added to the wet ingredients. The wet ingredients consist of the beaten egg, milk, and melted fat. Adding melted fat to the wet ingredients and then combining with the dry ingredients is called the muffin method for mixing batters. We need to think about the temperature of the milk when fat is added to the milk and egg mixture. If it is cold, some fats harden as soon as they strike the milk and then do not mix well. To avoid this, use milk which is about room temperature. When combining the ingredients we may use several different methods such as stirring, beating, or cutting and folding.

Stirring is moving the spoon with a circular motion around the bowl until the dry and wet ingredients are mixed.

Beating is moving the spoon from the bottom of the bowl up through the batter and over to the other side, with a long stroke. Beating an egg is a good example of how beating makes the product light by inclosing air. Some batters are beaten with the idea of inclosing as much air as possible. When this is the case the mixture should not be stirred after beating because stirring breaks the air bubbles that are forming and the product will not be as light.
Cutting and folding is cutting down into the batter with the edge of the spoon and then lifting and turning or folding it over. This is the method used for combining beaten egg white with a batter.

The biscuit or pastry method of combining fat is to cut or rub the cold fat into the dry ingredients. This may be done with two knives, with a fork or fingers or a pastry blender. When knives are used, hold one in each hand, cutting with the blades crossed until the fat is separated into small particles. When a fork is used, press it against the bowl. When the fingers are used, pick up a portion of fat and flour, rub it lightly between the fingers and thumb, and then drop it and pick up another portion.

One authority gives the following directions for pastry: “Continue this process until none of the flour-fat particles are larger than a navy bean.” It is easy for the inexperienced person to rub the mixture too long. When this is done, the grains of flour are so coated with grease that they will not take up enough water to make the pastry flaky. Our mothers obtain good results because they know how the mixture looks and feels when it is just right. One disadvantage is that fingers warm the fat. When they are used, wash the hands thoroughly, rinse in cold water, and wipe them.

To have success, start with cold fat and work quickly. An expert uses no more than a minute to combine fat and flour for one pie with the fingers. All mixing should be done quickly and lightly.

Kneading.—Turn the dough onto a board or pastry canvas that is covered with a very thin layer of flour. A pastry canvas is a piece of coarse canvas cloth used in place of a molding board. Lightly grasp the dough at the opposite side of the board with floured finger tips, pull it over toward you, and press down with the palms of the hands. After every push or two, turn the dough a quarter way around and fold it over toward you. Be sure to have all parts well kneaded. It is easy to demonstrate kneading but more difficult to describe it. Watch an expert kneader and then practice the motion.

Baking.—Many times breads are well prepared and then spoiled in the baking. The most accurate method for determining the heat of an oven is to use an oven thermometer or an oven heat regulator. If you have either of these at home, ask your mother about them. If not, the following tests will help us to decide when flour mixtures are thoroughly baked: a golden brown color, mixture shrunk from the pan, and no impression left when the top is lightly pressed with the finger. In case there is doubt about the center or bottom of the food being thoroughly baked, insert a clean wire tester or tooth pick and then withdraw it. Run the finger down the tester to see if bits of batter have clung to it. If so, it needs longer baking.

ALTERING RECIPES

Every girl hopes some day to be a fine cook. Many are able to make good things to eat by following recipes without trying to change them. Cooking is a greater pleasure when one knows how to alter recipes and also knows “why” the changes will work. Suppose you have a recipe which asks for sweet milk and all you have is sour, could you make the change? Have you noticed that recipes which contain sour milk or molasses call for soda? The reason for this is that both contain an acid which gives them a sour taste. Soda helps to neutralize or destroy some of the acid so we say that soda sweetens the mixture. Here are a few suggestions for altering recipes and some general proportions which are reliable. Recipes may not check with these proportions because other ingredients sometimes affect them.

1. One-half teaspoon of soda is used with one cup of sour milk, sour cream, or molasses. This may be altered if the milk or cream is either very sour or if it is only slightly soured. Soda is often used in recipes which contain brown sugar or chocolate.

2. The amount of baking powder to use depends on the ingredients or what is in the baking powder. Read the label around the can to find out the ingredients. All baking powders contain bicarbonate of soda (which we call soda) and cornstarch; some also contain dried egg white. You will also find an acid ingredient on the label. When liquid is added, the acid ingredient in baking powder unites with the soda and bubbles of gas are given off which make the batter or dough light. If the baking powder which mother uses is not listed in the table below, find out the name of the acid ingredient and write the name of the baking powder in its proper place.

There are three types or kinds of baking powders on the market. They are called tartrate, phosphate, and S. A. S. phosphate. A smaller amount of the S. A. S. phosphate powders is required because part of the gas bubbles which make the products light are given off when the liquid is
added and part when the product is heated. The table below will tell you how much of each kind to use with sweet milk recipes.

<table>
<thead>
<tr>
<th>Type of powder</th>
<th>Acid ingredient</th>
<th>Name</th>
<th>Amount to use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tartrate</td>
<td>Cream of tartar</td>
<td>Royal</td>
<td>1 1/2 t. to 1 c. flour</td>
</tr>
<tr>
<td>Phosphate</td>
<td>Tartaric acid</td>
<td>Rumford</td>
<td>1 1/2 t. to 1 c. flour</td>
</tr>
<tr>
<td>S. A. S. Phosphate</td>
<td>Calcium acid phosphate</td>
<td>Dr. Price's</td>
<td>1 1/2 t. to 1 c. flour</td>
</tr>
<tr>
<td></td>
<td>Sodium aluminum sulphate</td>
<td>Calumet, K. C.</td>
<td>1 1/4 t. to 1 c. flour</td>
</tr>
</tbody>
</table>

The number of eggs used affects the amount of baking powder because the air beaten into eggs adds lightness. For each beaten egg white added, two-thirds full and bake in a hot oven (425° F.) about 25 minutes or until they are done and brown. The inside is light, flaky, and dry.

Plain Muffins

2 c. flour, 1/2 c. S. A. S. baking powders or 3 t. of tartrate or phosphate, 1 c. milk, 1/2 t. salt

Grease the muffin pans. Sift flour before measuring. Measure the flour, baking powder, salt, and sugar. Mix and sift them into the mixing bowl. Beat the egg in a smaller bowl until foamy and add the milk. Add melted fat to the egg-milk mixture. Beat the egg in a different direction each time in order to keep the edge round. Roll out the dough on a lightly floured board. Top and tail until it thickens (about 20 seconds). The amount of liquid required varies with the flour, so each club member should experiment if the amount stated is not satisfactory.

Variations.—For sour-milk muffins use 1 c. of sour milk instead of 1 c. of sweet milk. Add soda and alter the amount of baking powder according to the directions given above. Combine in the same way with this exception, mix the soda with 1 T. of water and stir into the other wet ingredients.

For sweet-cream muffins use 1 c. thin cream and no other shortening. Since cream is thicker than milk, the flour is reduced to 1/2 c. For graham or whole wheat muffins use about equal amounts of dark and white flour. Mix the same as for plain muffins except that the graham or whole wheat flour is added without sifting.

Cornbread

The corn-meal muffin recipe makes a good corn bread when baked in a cornbread pan. Some people like the flavor of sour-milk corn bread better than that made with sweet milk.

Gingerbread

1 1/4 c. flour, 1 1/2 t. salt, 1/4 c. sugar, 1/4 c. molasses (mild), 1/2 t. ginger

Sift, then measure flour. Add salt and mix. Measure spices and soda, and place them in a small bowl and mix. Measure the sugar, molasses, and melted fat. Turn them into the mixing bowl and mix. Combine the beaten egg with the sugar, molasses, and fat. See that boiling water is ready. Add the flour mixture to the sugar-molasses-fat-egg mixture and stir until dampened. Add boiling water to spices and soda. Mix and add to the batter. Stir until it can be beaten without curdling; then beat one minute. Bake in shallow pan.

Variations.—Other spices may be added if desired. One-fourth c. honey and 1/4 c. of molasses may be used instead of 1/2 c. of molasses. Any of the following may be added: 1/2 c. nuts, 1/2 c. raisins, or 1/2 c. dates.

Baking Powder Biscuits

2 c. flour, 1/2 c. S. A. S. baking powder or 3 t. tartrate or phosphate, 1/2 c. fat

Combine the sifted dry ingredients and the fat by rubbing them together between the fingers and thumb. To do this pick up a portion of the flour and fat, rub it lightly, then drop it and pick up another portion, rub, and drop back into the bowl as before. Continue this process until the mixture is fairly smooth and has the general consistency of coarse corn meal.

Make a well in the center of the fat-flour mixture; then pour in the milk in all at once and stir vigorously until it thickens (about 20 seconds). The amount of liquid required varies with the flour, so each club member should experiment if the amount stated is not satisfactory.

Turn the dough onto the lightly floured board and without delay knead it vigorously for about 20 seconds. See directions for kneading, page 36. Flour the fingers and thumb if the dough begins to stick during kneading dust another thin layer of flour over the board.

Shape the dough into a ball; then pat it with the hand or roll with a rolling pin to the desired thickness, 1/4 to 1/2 inch. To use a rolling pin, touch the center of the ball of dough very lightly with the floured pin, roll lightly to an edge; repeat, rolling in a different direction each time in order to keep the edge round.

Bake in a hot oven (425° F.) from 12 to 15 minutes, or until the crust is an even brown and the inside is light, flaky, and dry.
Variations.—For short-cake, add 1 T. sugar if desired to the flour mixture; mix as for biscuits. Roll ¼ inch thick and cut into biscuits. Lightly butter the tops of half the biscuits and place an un-buttered biscuit on each. Bake in a hot oven. Sweeten fruit to taste; place between and on top of the biscuits. This shortcake may be served with cream.

For cinnamon rolls, roll biscuit dough thinner than for biscuits. Spread lightly with butter. Sprinkle with a mixture of 1 t. cinnamon to 3 T. sugar. Dot the dough with cut raisins if desired. Roll and cut into slices. Place, cut side up, on a greased pan and bake in a hot oven.

For apple dumplings, roll shortcake dough very thin, about ¼ inch thick. Wrap around apples which have been washed, cored, and pared. Apple quarters may be used for small individual dumplings. Fill center of apple with sugar and sprinkle with a little nutmeg. Brown sugar or cinnamon may also be used. Bake in a moderately hot oven until the fruit is cooked.

**SCORE CARD FOR QUICK BREADS AND COOKIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>General appearance</td>
<td>20%</td>
</tr>
<tr>
<td>Size and shape—uniform</td>
<td>15%</td>
</tr>
<tr>
<td>Crust—Color—an even golden brown, varies with kind</td>
<td>30%</td>
</tr>
<tr>
<td>Tendency—dropped cookies, muffins, biscuits</td>
<td>35%</td>
</tr>
<tr>
<td>Crispiness—rolled cookies</td>
<td>15%</td>
</tr>
<tr>
<td>Lightness—suitable relation of weight to size</td>
<td>30%</td>
</tr>
</tbody>
</table>
| Color—uniform, varies with kind | 35%

No flavor too predominating.

Total 100%

**WHOLE WHEAT NUT BREAD**

1 ½ c. white flour
2 ½ t. of S. A. S. baking powder or 1 ½ c. chopped nuts
3 t. of tartrate or phosphate
½ c. sugar
½ t. salt
1 egg
1 c. milk
2 T. fat (melted)

Add nuts to the dry ingredients and then use the muffin method for mixing. Pour into a greased loaf pan. Let stand for 30 minutes and bake in a slow oven (325° to 350° F.) for 50 to 60 minutes.

Variations.—One-fourth or one-half c. currants, dates, or raisins may be added with the nuts. Dates and raisins should be cut in small pieces so the bread will slice twice the size of the unbaked. The shape is symmetrical; that is, they rise evenly with vertical sides and level tops. They do not bulge at one side or flatten into shapeless forms.

Characteristics of good biscuits.—Good biscuits are light; the baked ones are about twice the size of the unbaked. The shape is symmetrical; that is, they rise evenly with vertical sides and level tops. They do not bulge at one side or flatten into shapeless forms.

The top is fairly smooth with a tender, golden-brown crust.

The inside is a creamy white, free from brown or yellow spots, and contains many small holes evenly distributed. It is light and fluffy rather than compact and soggy. It is flaky; it will peel off into long, thin sheets when a bit of it is grasped by the finger tips and pulled upward. This flakiness, always accompanied by extreme lightness, is one of the most desirable qualities of biscuits.

**RECIPE FILE**

Our circular does not contain all of the recipes we may desire to use, so let us start a recipe file. Find a box which will hold cards about 4 x 6 inches. Use cardboard division sheets cut one-fourth to one-half an inch higher than the recipe cards so that the name stands up higher than the cards something like the following:

Beverages
Bread
Cakes

Division sheets may be headed as follows:

- Cereals
- Desserts
- Fruit
- Pasty
- Score Cards
- Beverages
- Cheese
- Eggs
- Meat
- Salads
- Soups
- Cakes
- Confections
- Fish
- Menus
- Sandwiches
- Vegetables
- Food Preservation
- Cereals
- Desserts
- Fruit
- Pastry

There may be headings other than these which you might prefer for your file.

All recipes which you secure for making soups will be copied on stiff paper or cards and slipped behind the division sheet “Soups”.

Add to your file in various ways. Copy some of mother’s best recipes, ask relatives and friends for their best ones, and exchange successful recipes with club members. Recipes may be cut from magazines and pasted on the cards. Some recipes found in magazines are very good, while others are poor. It will be interesting to make a collection of such recipes and have a judging contest to select the better ones. Suggestions given for general proportions and for altering recipes will be helpful in judging the recipes. After the better ones are selected in this way another test is to try each recipe.

Each recipe that you try and find is good, mark in the upper right-hand corner “Good” and date it. Those which you have not tried mark “NT” (not tested) with a pencil. They can be changed later to “Good” or may be discarded. Some girls may prefer to put only tested recipes in their files.

**Problem IV—Bread—Rolls—Cookies—Dish Washing**

**EVERYONE** eats bread and all of us like good bread. Any woman or girl may well be proud of being able to make good bread and have the results uniform each time. To do this requires first an understanding of the principles of bread baking, then a selection of good materials, and careful work.

Your record book asks for the time required for making bread as well as baking it. Record only the time that you are working on the bread.
and not while it is rising, because you can do other things about the
kitchen while the bread rises.

You may wonder why the requirement is two loaves of white and two
loaves of whole-wheat bread. We want club girls to make such good
whole-wheat bread that the family will like it as well as white bread.
Then it will be easy to have a high score on whole grains. Is your food
score higher now than it was when you began the cooking club project?
We have used one-third as much whole-wheat flour as white flour. Some
people prefer to make it one-half or even two-thirds whole-wheat flour.
As the proportion increases, the bread becomes coarser, darker, and some-
what heavier. When you are satisfied with your results using one-third
whole-wheat flour, try a larger proportion. Some families prefer to use
whole wheat and 1 c. of white flour and beat well. A sponge should be
about the consistency of a medium batter. Cover and set to rise in a
moderately warm place until light and full of bubbles. It should be kept
out of a draft. When dry yeast is used the sponge is usually mixed after
supper and allowed to rise overnight.

**Dough.**—Add sugar, salt, melted fat, and one cup of flour to the light
sponge. Stir until well mixed; then add another cup of flour. The amount
of flour required for bread cannot be given exactly because it varies.
Some flours absorb more moisture than others. Since our proportion for
a soft dough is approximately one part liquid to three parts flour, the
above recipe calls for 6 c. flour for the 2 c. of liquid. We have now
added 5 c. of flour (3 c. white and 2 c. whole wheat). When the dough
is hard to stir the last flour may be kneaded into it. Add just enough so
that it will knead easily. It may be less or it may be more than the
remaining cup. Usually it will be more but we have given the smaller
amount in this recipe because it is easy to stiffen a soft dough, but hard
to soften a stiff one. In fact, it is better for a beginner not to try to soften
dough that is too stiff, because liquid makes it sticky on the outside
and then more flour is needed.

Flour for bread making should be sifted once before measuring.
Measure the flour so that you will know how much is required. This
saves time when making bread the next time. Scrape the sides of the
bowl and the mixing spoon with a spatula, so that the dough will be in
one mass. It is a good plan to knead the dough in the mixing bowl until
it is stiff enough to handle on the board without sticking. Wash your
hands thoroughly. Sprinkle flour over the dough and knead lightly.
Scrape the bowl and flour the hands and bowl when necessary. It is
possible to be neat when mixing and kneading bread if we are careful.
With a little experience one can tell when the dough is stiff enough. Ask
mother to help you decide. As a rule add only enough flour to keep the
dough from sticking. There is danger of adding so much that the dough
is hard to knead.

**Kneading.**—Knead until the dough is smooth and elastic, and bubbles
appear under the surface. This first kneading usually requires about 10
minutes. During the last few minutes we should be able to knead without
adding more flour. One can tell when the dough is elastic by denting it
with the finger. The dent quickly disappears if it is elastic.

---

### WHOLE WHEAT BREAD (two loaves)

- 2 c. lukewarm liquid
- ½ c. cake dry yeast
- 2 T. sugar
- 4 c. white flour (approximate)
- 2 T. fat
- 2 t. salt
- 2 c. whole wheat or graham flour

**Sponge.**—Soak the yeast in ½ c. of lukewarm liquid about one hour.
To tell whether a liquid is lukewarm, let a drop fall on the inside of the
wrist where the blood vessels come near the surface of the skin. If it feels
neither cooler nor warmer than the wrist, it is about lukewarm. Stir the
soaked yeast into the rest of the lukewarm water (½ c.). Add 2 c. of
whole wheat and 1 c. of white flour and beat well. A sponge should be
about the proportions given above. It is important to have the dough
thoroughly kneaded before the flour is added.

**Dough.**—Add sugar, salt, melted fat, and one cup of flour to the
light sponge. Stir until well mixed; then add another cup of flour. The amount
of flour required for bread cannot be given exactly because it varies.
Some flours absorb more moisture than others. Since our proportion for
a soft dough is approximately one part liquid to three parts flour, the
above recipe calls for 6 c. flour for the 2 c. of liquid. We have now
added 5 c. of flour (3 c. white and 2 c. whole wheat). When the dough
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and then more flour is needed.

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With a little experience one can tell when the dough is stiff enough. Ask
mother to help you decide. As a rule add only enough flour to keep the
dough from sticking. There is danger of adding so much that the dough
is hard to knead.

**Kneading.**—Knead until the dough is smooth and elastic, and bubbles
appear under the surface. This first kneading usually requires about 10
minutes. During the last few minutes we should be able to knead without
adding more flour. One can tell when the dough is elastic by denting it
with the finger. The dent quickly disappears if it is elastic.
Knead in a warm place so that the dough will not become chilled. In cold weather it may be necessary to warm the flour, the molding board, and the hands. Lightly grasp the dough at the opposite side of the board with floured finger tips, pull it over toward you, and press down with the palms of the hands, curving the fingers to keep the dough from flattening too much. After every push or two, turn the dough a quarter way around and fold it over toward you. Continue folding, pressing, and turning the dough. When thoroughly kneaded place the dough in a lightly greased bowl.

First rising.—Turn the dough over once or twice in the bowl so that the surface of the dough is thinly greased. This prevents the surface from drying and cracking. Cover with a cloth and set in a warm place to rise. When the dough has risen to about double its original bulk, test with the finger to determine whether it is ready to knead down for a second rising.

Kneading down.—When a light pressure leaves a dent, press down the center of the dough and fold from the sides to the center until the dough is reduced to its original size. This may be done in a minute or less. The purpose is to let out some of the gas so that fermentation may continue without injuring the gluten by causing it to stretch too far and to bring a new food supply near the growing yeast cells. Round the dough into a ball, cover, and set in a warm place to rise.

Second rising.—The second rising may be omitted if desired, but it helps to give a finer, more even, and delicate texture. When the dough has again doubled in bulk and retains the dent when pressed lightly, it is ready to be kneaded down the second time and divided.

Dividing.—Learn to handle the dough quickly and lightly. If possible use no more flour on the board at this time, because it will cause streaks. Divide the dough into equal portions and form into balls. Cover closely and let stand ten minutes. This seals the open pores made by cutting and allows the dough to loosen before molding into loaves.

Shaping into loaves.—Single pans, each holding a one-pound loaf, are best for general appearance of the loaf and thoroughness of baking. Following is one method of shaping loaves. Other methods also give good results.

Flatten the dough into an oblong sheet with the palms of the hands. Fold and seal the long sides together with knuckles. Flatten the dough again, slightly pulling it into a longer sheet. Fold by bringing narrow ends together so they slightly lap at the center and seal with knuckles or palms of hands. Now fold the nearest long side one-third and seal. Fold opposite side of dough over and seal it; then shape with the hands into a long roll until it will fit the pan. Place in greased pans smooth side up. Cover and allow to rise in a warm place until it has nearly doubled in size. Bread continues to rise for a short time after it is placed in the oven so we must allow for this.

Baking.—Start the oven so that it will be hot when the bread is ready. It is better to have the oven wait for the bread than for the bread to wait for the oven, because it continues to rise and become too light. Ask mother to help you decide when the oven is right. The oven should be between 375° and 400° F. for an ordinary sized loaf. Place the pans so the heated air will circulate around each and the shape of the loaf will be better. It is well to turn the pans after the first 20 minutes to have them bake evenly. The heat may then be lowered a little. Bread is done when the loaves shrink from the sides of the pan and give a hollow sound when tapped. Careful baking gives a golden brown crust. To soften the crust,
rub it with a little butter or milk after removing it from the pan. Fill out the report in your record book.

Care after baking.—The loaves may be cooled on a wire cake-cooler or they may be set crosswise of the empty pans so that the air reaches them on all sides. If the loaves are away from dust and flies it is better not to cover them while cooling. When the bread is thoroughly cold put it into a paper-lined tin box or into a stone jar, and cover. Do not wrap a cloth around the bread because cloth absorbs moisture and may affect the flavor of the bread. Ask mother how often to scald and air the bread box in order to prevent mold.

BREAD VARIATIONS

Whole-wheat bread.—More sugar may be added for flavor. Try 4 T. of sugar instead of 2 T. Try substituting molasses or honey for part or all of the sugar. Honey helps to keep the bread moist.

White bread.—Use all white flour.

Milk bread.—Substitute milk for one-half or all of the total amount of liquid used in making bread. The milk should be scalded and cooled until lukewarm before using. One reason for this is that bread dough is kept at a temperature which might sour some milk before the bread is baked. Another reason is to kill any undesirable bacteria.

Nut or raisin bread.—One-half to one cup of chopped nuts or raisins may be added to either white or whole-wheat bread when it is made into a stiff dough. This dough should be a trifle stiffer than plain dough since it does not stick together quite so well when it is kneaded. The bread will slice better if nuts and raisins are cut into small pieces.

Potato bread.—Many people like bread made with potato water and a small amount of mashed potatoes. If the water is saved when potatoes are cooked for a meal it will be possible to use the water. One T. mashed potato is used for each loaf of bread and it is added to the potato water.

Bread made with compressed yeast.—Compressed yeast acts more quickly than dry yeast. We may complete the process in five or six hours if we use one-half cake for two loaves of bread. Increasing the yeast decreases the time. You may want to use one cake of yeast for two loaves of bread and see how long it takes. Compressed yeast comes in a moist form so does not need soaking but we dissolve it in lukewarm liquid before using in order to mix it thoroughly with the sponge or dough.

"Straight-dough" method.—The whole-wheat bread in this problem is made by the "straight-dough" method. If you would like to try the "straight-dough" method, add the-liquid before using in order to mix it thoroughly with the sponge or dough. The "straight-dough" method is shorter than the sponge method when we have dry yeast.

Since sugar is in a form which the yeast plants can use quickly it hastens the rising. This is a reason for adding it to the sponge in cold weather. Salt and fat retard the growth of yeast. Salt is added for flavor. Fat makes bread more tender and may add to the flavor.

Compressed yeast is moist like cheese and because of this the yeast plants are in a more active form. Can you tell the reason for using the "sponge" method when we have dry yeast?

Dough is kneaded to develop the gluten and make it elastic. Did you ever chew a few grains of wheat? If so, you know what we mean by wheat gum. It is the gluten which becomes elastic when chewed or kneaded. Gas bubbles are held in the dough by the elastic gluten.

Have you noticed the odor of alcohol when the oven door is opened after bread begins to bake? Alcohol as well as carbon dioxide gas is formed by the action of yeast on sugar and starch. The change produced by this action is called fermentation. We do not taste the alcohol in bread because the heat of baking vaporizes it or drives it off. Besides vaporizing the alcohol, baking kills the yeast plants and hardens the gluten so that the bread remains porous. If you are privileged to study food chemistry in college you will learn many of the "Whys" in cooking.

FOOD VALUE OF BREAD

Breads as well as cereals are excellent sources of energy. We do not think of bread as a protein food but considering the amount of bread which most of us eat, it is valuable as a source of protein as well as of carbohydrate. Graham and whole-wheat breads are valuable for their laxative properties, due to the cellulose they contain. These breads are a good source of iron and phosphorus and of vitamin B.

When an abundance of vegetables and fruits are in the diet it makes little difference whether white or whole-wheat bread is used. However, when there is a scarcity of vegetables and fruits, whole-wheat flour is an excellent source of minerals, vitamins, and cellulose found in many vegetables and some fruits.

Rolls

Rolls may be made from bread dough or from a richer, sweeter dough. When beginning to make rolls it is a good plan to use plain bread dough because it is easier to handle.

A general rule for making plain roll dough is to double the amount of sugar and fat used in bread dough. Let us take for example the recipe often used for one loaf of bread and compare it with the roll recipe.

<table>
<thead>
<tr>
<th>White Bread (1 loaf)</th>
<th>Plain Rolls (24 small)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 c. lukewarm liquid</td>
<td>1 c. lukewarm liquid</td>
</tr>
<tr>
<td>¾ c. cake yeast</td>
<td>¾ c. cake yeast</td>
</tr>
<tr>
<td>1 T. sugar</td>
<td>2 T. sugar</td>
</tr>
<tr>
<td>1 T. fat</td>
<td>2 T. fat</td>
</tr>
<tr>
<td>1 t. salt</td>
<td>1 t. salt</td>
</tr>
<tr>
<td>3 c. flour (approximately)</td>
<td>3 c. flour (approximately)</td>
</tr>
</tbody>
</table>
Remember the amount of flour is not exact. It may take another cupful, but it is better to use the smaller amount first and then add more as it is needed. The dough for rolls is often softer than bread dough. A larger quantity of yeast may be added, because a richer dough rises more slowly.

Follow the directions for making bread and when the dough has risen the second time it is ready to be made into rolls.

Variation.—For richer rolls use 1/2 cake yeast, 4 T. sugar, 4 T. fat and 1 egg. Add the sugar, melted fat, and beaten egg to the light sponge before making the dough.

LIGHT ROLLS

Cut the dough into pieces that are about half the size you wish to have the rolls. Shape into balls and place in a greased pan. Let rise until double in size and bake about 25 minutes in a hot oven. Watch them carefully because they bake more quickly than a loaf of bread.

4-H CLUB ROLLS

Place four small balls of dough in each muffin pan. Let rise until double in size and bake in a hot oven for about 25 minutes. They should be nicely browned.

CINNAMON ROLLS

Roll or stretch dough into a rectangular sheet about one-fourth of an inch thick. Spread lightly with softened butter. Sprinkle with a mixture of cinnamon and sugar. Some people prefer 1 tablespoon cinnamon to one-half cup of sugar. What proportion of cinnamon to sugar is this? Currants or chopped raisins may be scattered over the dough before it is rolled. Roll the dough as a "soldier rolls his blanket," then cut off slices about one inch in thickness and place close together with the cut side down on a greased pan. Let rise until light and bake in a moderately hot oven until well browned and thoroughly baked.

PARKER HOUSE ROLLS

Roll the dough until it is about one-third inch thick; then cut with a biscuit cutter dipped in flour. Make a crease across the center of each round, using the dull edge of a case knife which has been dipped into flour. Brush half of each round with melted butter, fold over at crease, and press edges together. Place in a shallow greased pan. Let rise until double in size and bake in a moderately hot oven until well browned.

SCORE CARD FOR YEAST BREAD

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>General appearance: Size—best when baked in single loaf pans.</td>
<td>20%</td>
</tr>
<tr>
<td>Shape—slightly rounding, fairly symmetrical.</td>
<td></td>
</tr>
<tr>
<td>Color—an even golden brown, varies with kind.</td>
<td></td>
</tr>
<tr>
<td>Thickness—about one-eighth inch uniform depth.</td>
<td></td>
</tr>
<tr>
<td>Smoothness—unbroken crust, slightly shredded appearance above the pan.</td>
<td></td>
</tr>
<tr>
<td>Quality—crisp and tender.</td>
<td></td>
</tr>
<tr>
<td>Lightness—suitable relation of weight to size.</td>
<td>15%</td>
</tr>
<tr>
<td>Color—light cream, varies with kind.</td>
<td>30%</td>
</tr>
<tr>
<td>Texture—cells of medium size with very thin walls.</td>
<td></td>
</tr>
<tr>
<td>Uniform cells.</td>
<td></td>
</tr>
<tr>
<td>Elasticity—soft, springs back when pressed.</td>
<td></td>
</tr>
<tr>
<td>Moisture—not doughy from underbaking, not crumbly.</td>
<td></td>
</tr>
<tr>
<td>Flavor, taste, and odor: Slightly sweet, nutty, resembling grain of wheat.</td>
<td>35%</td>
</tr>
<tr>
<td>No &quot;off&quot; flavor—yeasty, musty, sour, etc.</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

COOKIES

There are two main classes of cookies, the dropped and the rolled. Dropped cookies are made from a stiff batter and rolled cookies from a soft or stiff dough.

Dropped cookies are dropped from a teaspoon onto a greased pan. They are softer than rolled cookies.

Rolled cookies are rolled on the molding board and cut as desired. The secret of success in making rolled cookies lies in handling the dough as little as possible, and in using no more flour than necessary. This may be

1 Taken from Extension Circular 940, "Home Baking of Breads."
accomplished by chilling the dough before rolling. Make light, quick strokes when rolling the dough. Use only enough flour to keep the dough from sticking. Cut or ice-box cookies are a variation of rolled cookies. The dough is made stiffer than for rolled cookies. To make them, shape the dough into a cylinder of the diameter you desire in your cookies. Place the cylinder on a plate and put it in the ice-box or other cold place. When thoroughly chilled, cut the dough into thin slices and bake. Rolled cookies may be either soft or crisp, depending upon the richness and stiffness of the dough and how they are rolled. Rich, thinly rolled cookies are crisp. Less rich cookies of medium thickness are soft. Soft, rolled cookies are about one-fourth inch thick when baked.

GENERAL RULES FOR MAKING COOKIES

1. Conventional or cake method of mixing: Mix and sift the dry ingredients except sugar. Cream the fat; then add sugar gradually. Beat eggs and add to creamed mixture. Add liquid alternately with part of dry ingredients. Add the remaining dry ingredients. When fruit or nuts are used add them before all of the flour is added. Wash fruit, dry, and dredge with a small portion of the flour before adding it. This may be called the cake method because it is one of the methods used for mixing butter cakes.

2. Quick methods give satisfactory results. Two quick methods often used for cookies are the muffin method and the cake-mixer method. For the muffin method see Problem III. The cake-mixer method is as follows: Measure all ingredients and sift the dry ingredients. Soften the fat, put all ingredients in the bowl, and stir until well mixed.

PLAIN SUGAR COOKIES

| ½ c. fat | ¼ t. salt |
| 1 c. sugar | 2½ t. of S. A. S. baking powders or 3 t. of tannate or phosphate |
| 1 egg | 2 c. (+) flour |
| ¼ c. milk | 1 t. flavoring |

We might state the amount of flour as 2 c., plus enough more to make a soft dough. Since we know it will require 2 c. we may add the baking powder and salt to this amount and be sure of using it. Bake in a moderate oven until lightly browned.

Variation.—For richer cookies omit milk and add another egg.

CHOCOLATE DROP COOKIES

| ½ c. fat | 1½ c. flour |
| 1 c. sugar | ½ t. soda |
| 1 egg | 1 t. baking powder |
| ½ c. milk | ½ t. salt |
| ⅛ c. cocoa | ½ c. chopped raisins |
| ¼ t. salt | ½ c. chopped nuts |
| 1 t. vanilla |

Sift the flour before measuring. Then sift together the flour, baking powder, soda, cocoa, and salt so that the flour mixture will be ready to add later. Cream or work the fat in a mixing bowl until it is soft and creamy. Add the sugar and mix well with the fat. Add the beaten egg and mix well.

Add about one-half of the flour mixture, then the milk and vanilla, then the other half of the flour mixture. Stir after each addition until smooth.

DISH WASHING

A 4-H club girl stated in her story that since she had joined the club she had learned to like to wash dishes. It has been said there is joy in doing anything perfectly. This may be the secret. She had learned to do her dishes so well that it was a real pleasure.

The following suggestions will not only help us to do this job well, but they will give us ideas for discussing dish washing in a demonstration.

Arrange dish pans so that they are convenient and one can work at a comfortable height. At which side of the dish pan should the draining pan be placed in order to save unnecessary motions? When we wash dishes, we hold the dish cloth in the right hand and the dish we are washing in the left. If the draining pan is placed at the left, the dish can be placed into it with a shorter, easier motion than if it is placed at the right.

The sink or table should be high enough to enable one to stand erect while working. If yours at home is not the proper height, what can be done to make it so? Think of other people who work at the same table. Perhaps mother has placed blocks of wood under the legs of the table to make it the right height. Many sinks are too low. When this is the case, a pan or wooden rack may be placed underneath the dish pan.

Be sure the dish cloth is clean when you start because a greasy cloth will soil the water. We do not like to think of eating from dishes which have been washed with a dirty cloth. Rinse well after using, wring, and spread out to dry, preferably in the sun. Scald the dish cloth often or have a good supply so that you can exchange for a clean one. Some people have two sets of dish cloths, one for table dishes and one for kitchen ware. The dish cloth should not be used for other purposes. Have another cloth handy to use in case of accident when food is spilled on the floor or stove.

Dover egg beaters, meat grinders, and some other equipment should not be allowed to lie in the dishwater because there is an oil on certain parts of them which should not be removed. They may be held in the hand so that only the soiled parts are washed. Wooden handles of knives and forks gradually soak loose if they lie in water.

1. Scrape the dishes well; stack them in neat piles to the right of the dish pan. Dishes may be scraped with a plate scraper or soft paper. Tissue paper may be kept in a convenient place for this purpose.

2. Soak dishes which are hard to wash. Use cold water for dishes which have held uncooked eggs, uncooked flour or starch, milk or cream. Use hot water for dishes which have held sugar or sirup, greasy food, and most cooked foods.

3. Wash the dishes in hot, soapy water until they are clean. The water should be as hot as the hands can bear. Dissolve soap chips in a small
amount of boiling water, then add cold water until it is the proper temperature. A soap shaker is a convenience for using small pieces of soap. Do not leave the cake of soap in the water. Change the water often. Save later work by keeping the water from dripping on the floor.

The general order for washing dishes is as follows: glassware, silverware, china, and kitchen utensils.

4. Rinse the dishes in boiling water.

5. Drain dishes in order to dry them quickly. A wire rack which may be lifted out of the water or placed in a sink makes draining easier.

6. Dry glassware and silver with a dish towel. China need not be dried with a towel if it is rinsed in scalding water and well drained. It is surprising how much time can be saved in this way.

Have a liberal supply of towels so that it is not necessary to use them too long. The care that is given them makes a difference in keeping them white. Spread out and hang so they will dry thoroughly after using. Scald often. Some people wash dish towels every day.

If possible, arrange so that the clean dishes may be placed in the cupboard without extra steps or extra handling.

Make a game out of dishwashing by noting the time it takes to wash the dishes; then try to beat your own time record. Reduce the time it takes, but improve the kind of work done.

**Problem V—Breakfast—Salads—Sandwiches**

It is NOT difficult to cook one or two foods well at a time but the real test of a good cook comes when meals are prepared. This month each club member is to prepare a breakfast alone. You may prepare as many meals as you wish and may have help with them, but before the month is over, prepare one by yourself without any help except that mother or someone else may help you ten minutes before sitting down at the table. Nearly everyone appreciates having assistance during the last few minutes. Are you always thoughtful about helping mother at this time when you are at home? During the last few minutes, especially in hot weather, the appetite is stimulated. Cereal is next because it stimulates the appetite. Cereal is next because its mild flavor is relished more before such strong flavors as bacon or meat; bread, rolls or toast; beverage.

Fruit is served first because it stimulates the appetite. Cereal is next because its mild flavor is relished more before such strong flavors as bacon or meats. As a rule foods served for breakfast should be simple and easily digested. A sample breakfast for a family of five, ages of children 16, 13, and 8 years, is as follows:

**Plan the meal at least a day or two in advance so that all the necessary supplies may be ordered. Some people prefer to plan meals several days or even a week in advance. There are advantages in doing this provided one allows for the use of leftovers. Some of the advantages are:**

1. More well-balanced meals from the health standpoint. The meals of a day or week are considered as a unit. The expression "What shall I have for supper tonight?" is not heard so often. This often results in a hurried meal which does not give a well-balanced menu for the day.

2. A better variety.

3. More economical meals. One is likely to plan on using more inexpensive foods.

What helpful ideas do you find in the discussion on "Planning Meals for Health" and "Menu Making" in Problem I?

In order to have variety in our meals, we should choose foods from the different groups (see Problem I). We should have contrast in color, flavor, and texture, and avoid repeating the same food even though it be served in a different form. This will be explained more in detail in the Meal Planning and Preparation problems.

When planning our breakfasts, let us think of foods which should be included in the light and also the heavier breakfasts.

**Light breakfast—suitable for school boys and girls, and grown-ups who exercise moderately:** fruit; cereal or buttered toast or both; beverage—milk or cocoa.

**Heavier breakfast—suitable for grown-ups doing active work:** fruit; cereal; eggs, bacon or meat; bread, rolls or toast; beverage.

**ORDER SUPPLIES**

Make a list of the supplies that will be needed in plenty of time and order those which are not on hand. For your report figure the total cost of the breakfast as nearly as you can and then the cost for each person. Figure the cost on everything except salt and baking powder because these are used in such small quantities. Find the cost of the food although you did not buy it especially for this meal. If it is food raised at home find out the market value, that is, the price you would pay if you bought it at the store. You cannot estimate the cost exactly until the meal is over and you know how much was eaten.

On a separate paper write out the cost of your breakfast. Cost of the food in this sample breakfast, using November, 1936, Lincoln prices, is as follows:
MAKE PLAN OF WORK

Plan on paper when you should do each part of the work. Try to arrange so that you will not need to be doing two things at the same time. When a long-cooked cereal as well as quick bread is served, it is often a good plan to cook the cereal while preparing supper the night before. If it is cooked in a double boiler, all one needs to do in the morning is to place the double boiler over the heat. Make a note of the time used in preparing the meal, as this is a part of the plan. It will be easy to estimate the time it takes to prepare a certain menu if you have kept your record book up to date. The information in the two columns "Number of minutes for preparation" and "Number of minutes for cooking" is especially valuable when we are preparing meals because it gives us the time required for certain recipes.

In your plan, start everything in plenty of time; then you can keep ahead of your work and not become rushed or excited. Try to have everything done at the right time, not too far ahead and not behind time.

Table

<table>
<thead>
<tr>
<th>Work</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare tomato juice. Heat cereal. Lay the table. Break eggs. Wash muffins and remove when done.</td>
<td>6:55 a.m.</td>
</tr>
<tr>
<td>Serve poached eggs.</td>
<td>7:50 a.m.</td>
</tr>
<tr>
<td>Clear the table. Wash and wipe dishes.</td>
<td>7:50 a.m.</td>
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Prepare The Dining Room

Some of the suggestions that follow apply to dinner or supper rather than breakfast. For example, the dining room is cleaned in the forenoon but may often be dusted and aired before breakfast. An attractive dining room is well cleaned, dusted, and aired before the table is laid. Simple furniture which is easily kept clean is most appropriate.

Would you prefer to eat at table No. 1 or No. 2? Why? Is it true that food tastes better when it is nicely served?

Table No. 1.—Room has not been dusted or aired, the table cloth is soiled and wrinkled, the dishes look greasy and sticky, while part of them are chipped or cracked. Some of the food is served on dishes that are much too large for the amount. The "covers" are carelessly arranged. Some of the food has been served before and has been warmed over, then returned to the same soiled dishes.

Table No. 2.—Everything about the room is attractive. The table cloth may not be as expensive as that used for No. 1, but it is snowly white and carefully laid on the table. All of the dishes shine because they have been well washed and dried. In the center of the table are a few flowers. The food that is being served is steaming hot, and is served in dishes of appropriate size. There are foods that have been left over from a previous meal but they have been prepared so attractively that no one is conscious of eating left-overs.

LAY THE TABLE

The main points to be kept in mind are simplicity and the comfort of those to be served.

Silent cloth.—This is placed first. It protects the table, prevents noise, and helps the table cloth to look better and wear longer.

Table cloth.—Place the center fold of the table cloth straight down the center of the table with opposite ends of the cloth the same distance from the floor. It is well to have the cloth hang about nine inches from the edge of the table on all sides. Every woman appreciates beautiful, spotless linen. A cloth or paper may be laid under the plate of small children to help them do their part in caring for the table cloth.

A dish of fruit, a small plant, or a vase of cut flowers (perhaps clover blossoms or wild flowers) may be placed in the center of the table.

Covers.—A cover includes the silver, china, glassware, and napkin used by one person. At least 24 to 30 inches of space should be allowed for each cover. The plate line is one inch from the edge of the table. The plate, silver, and napkin should be placed evenly along the plate line. Knives, forks, and spoons are placed in order of their use, those used first on the outside, with the exception of the dinner knife and fork which are always placed next to the plate. The dinner plate may or may not be left on the table but it is a good plan to use one when laying the table in order to have the proper distance between the knife and fork.

The knife is placed at the right of the plate with the cutting edge toward the plate. Spoons are placed at the right of the knife with bowls up. Forks are placed at the left of the plate with tines up. The napkin is placed at the left of the fork with hemmed and open edges turned toward the fork and edge of the table. The glass is placed at the tip of the knife.
The bread and butter plate is placed at the tip of the fork. If individual butter spreaders are used, lay them across the upper part of the bread and butter plate, the sharp edge toward the center of the plate and the handle conveniently placed for the right hand.

Salt and pepper shakers should be placed where they may be easily reached. Individual sets may be placed in front of each cover or between two covers on a line with the water glasses.

Relishes and jellies are placed where they may be conveniently reached. Serving silver for these is placed at the side of the dish parallel to the edge of the table with handle to the right.

Serving silver should be conveniently placed for the host and the hostess on a line with the silver at the cover or in front of the cover near the food to be served.

Chairs are placed with edges even with the edge of the table, so that the line of the cloth will not be broken.

When serving your breakfast, put on a clean apron and look as attractive as possible. Fill water glasses three-fourths full just before the meal is announced. If glasses are refilled at the table we avoid the danger of mixing them.

Serve hot food hot and cold food cold. A dish may be heated by letting it stand in the warming oven or in hot water. Make each dish appetizing. Have the size of the dish appropriate for the amount of food. It is a good plan to test the seasoning before serving food. Pour from the stirring spoon into the tasting spoon. Never put a spoon into your mouth and then into food that is to be served to others.

There are several forms of meal service but in this problem we will discuss general rules for family service. With this form of service, food is served by the host and hostess and members of the family.

Place the plates in a pile in front of the host or father; arrange cups and saucers unstacked in a half circle in front of the hostess or mother.

The hostess or mother is always served first, then other members of the family in the order in which they are seated. Plates are passed by

Those at the table unless the group is too large, in which case one member of the family may pass the plates as the host serves.

All accessories as bread, jelly, relish, etc., are passed to the hostess first and then around the table.

The water pitcher may be placed on the table if the family is small. Glasses may then be passed to be filled. One member of the family may pour the water.

A service cart is a great help because dishes on which food was served may be removed by passing to the host or hostess, who piles them on the service cart, thus saving the time and energy of the hostess.

The dessert plates and dessert may be on the service cart at the left of the hostess. When the dishes from the main course have been placed on the service cart, the hostess passes the dessert to the persons sitting at her right and at her left, who in turn pass it to the other members of the family.

Children should be taught to assist with the meal service as early as possible.

When serving your breakfast, you are to do all of the waiting on the table. Probably you are used to waiting on the table, for that is a place where daughters can save mothers many steps. The form of service in which filled plates are brought from the kitchen and served by a waitress is used for formal occasions. If you would like to serve your breakfast in this way, you will need some other general rules.

A waitress should pass foods to which guests help themselves to the left of the guest, holding the dish low and conveniently near.

Place and remove dishes from the left with the left hand. Plates may be placed either to the right or left side of a person. In our directions we will use the left-hand service. A waitress should never reach in front of a guest; to avoid this the beverage or any dish which has been placed at the right is removed from the right with the right hand. Extra silver for the dessert course may be brought in on a tray just before the course is served. In this case it may be placed from the right, with the right hand at the right of the cover.

In removing courses, dishes should never be piled in front of a guest.

In removing the main course, dishes in which food has been served at the table should be removed before the individual plates.

In refilling water glasses, they should not be lifted from the table if space permits. If necessary to move them, take hold of them near the bottom of the glass.

A tray covered with a doily should be used for bringing all silver and small dishes.

With formal service, usually but one plate is placed or removed at a time. With informal service it is permissible to place or remove two plates at a time.
Crumbs should be removed from the table cloth when necessary between courses. A napkin and plate may be used.

CLEAR THE TABLE AND FINISH

Have a cleared space ready for the soiled dishes as they are removed from the table. Everything that belongs to one course is removed before the next is served.

Remove in the following order: First take the dishes containing food such as bread, butter, meat, and vegetables. If an accident occurs, keep cool, think quickly, and act wisely. Next remove the soiled dishes at each cover. Remove any clean dishes that are left unless they are to be used in the following courses.

Work quickly.

Set all food away from dust.

Wash the dishes, sweep the kitchen, and leave it in perfect order so that mother will be glad to have you cook again.

SALADS

Salads add freshness, color, and a pleasant acid flavor to our meals. They may be both time and money savers. It is convenient to have the ingredients for a salad prepared in advance; then it is only necessary to combine them before serving. Salads are economical because left-over food may be used in many attractive ways.

FOOD VALUE AND PREPARATION OF SALADS

Fruits and vegetables add important minerals and some of them when raw are valuable for vitamin C. Starchy vegetables, meats, nuts, cheese, and rich dressings have a high fuel value. Meat, fish, egg, and cheese salads are rich in protein. Because of the cellulose, acids, and fats which they contain, salads are laxative.

As a rule the dinner salad should be light; a salad green such as lettuce or cabbage with a simple dressing is preferable. For luncheon, a salad is frequently the main dish. Rich combinations of foods require a long time to digest so let us keep our salads simple. For growing children or for people with weak digestion, the vegetable or fruit salads with little dressings are preferable. Juicy fruits and vegetables make the salad dressing too thin.

Serve small portions neatly arranged. Salad is attractive if served on lettuce but the lettuce should not cover the plate or hang over the edge.

FRENCH DRESSING

2 T. lemon juice or mild vinegar
4 T. salad oil
1/2 t. paprika
1/2 t. salt

Mix ingredients and beat well, using a silver fork or shake in a covered jar until it is thick and creamy. One T. catsup may be added.

COOKED DRESSING

2 T. sugar
1/4 t. salt
1/4 c. vinegar
1/2 t. mustard
3/4 c. water
2 T. butter

Mix the dry ingredients in upper part of double boiler. Add vinegar and water. It saves time and stirring to heat the liquid before adding. Cook over the fire until raw taste disappears, stirring frequently to prevent sticking. Beat the eggs in a small bowl. Pour the hot mixture slowly into the beaten eggs, stirring constantly. Remember that egg cooks quickly and if it is overcooked the mixture will separate. Stir in the butter and remove from the fire. Beat with a dover egg beater. Cool thoroughly. This dressing may be thinned with cream before using. Mix in only a small amount of cream at a time because there is danger of getting it too thin. Dressing should be stiff enough to hold its shape when a spoonful is placed on top or at the side of the salad. The mustard may be omitted when this dressing is used for fruit salads. The sugar or salt may be increased to suit the salad.

MAYONNAISE DRESSING

1 egg yolk
1 c. salad oil
1/2 t. salt
1/4 t. powdered sugar
2 T. vinegar or lemon juice
1/2 t. mustard
1/4 t. paprika

Mix seasonings with egg yolk, add acid, and beat. Add oil at first by teaspoonfuls. Continue beating, adding oil in larger amounts as soon as the dressing thickens. More oil, acid, and seasonings may be added to make a larger amount of dressing.

Cooked vegetables, meat, and fish are improved in flavor by "marinating." To marinate, allow the cut materials to stand in French dressing until seasoned; then drain well before making the salad.

Prepare salad materials in advance and keep cold. Fruit juices such as lemon and orange may be poured over diced apples or bananas to keep them from turning dark.

Combine ingredients immediately before serving. This is necessary at any time for best results but it is essential in some cases. For example, fruits may cause mayonnaise to separate. English walnuts turn dark and develop a disagreeable taste in the presence of acids. Lettuce wilts in contact with oil.

Avoid a mussy appearance by careful preparation and combining. Diced materials do not break up as easily as sliced ones. Mix by lifting lightly with a fork rather than by stirring with a spoon.

Before assembling the salad all the materials should be drained. Lettuce leaves may be placed between towels and pressed lightly to remove drops of water. Juicy fruits and vegetables make the salad dressing too thin.

A simple edible garnish is most attractive. Eat your lettuce leaf or other greens and do not waste vitamin C by leaving it on the plate.

Serve small portions neatly arranged. Salad is attractive if served on lettuce but the lettuce should not cover the plate or hang over the edge.
SANDWICHES

We naturally think of sandwiches in connection with salads because they are often served together for home, school, and picnic lunches. Plain bread and butter sandwiches are appropriate to serve with salads because salads furnish the extra flavor which is found in sandwich fillings. These suggestions will help us to make dainty, attractive sandwiches.

The bread used for sandwiches is easier to cut if it is at least a day old. Use a sharp knife so that the slices will be thin and of uniform thickness. Thin slices are easier to butter if they are spread before cutting from the loaf. Cream the butter by working it with a spoon until it is soft. This makes it easier to spread and also saves butter. Sandwiches that are prepared ahead of time may be wrapped in a damp napkin or oiled paper and kept in a cool place. They may be served attractively on a plate, tray, or basket by arranging them neatly on a doily and garnishing with parsley, celery tips, or nasturtium leaves. A variety of breads may be used as well as a variety of fillings. Whole-wheat, graham, nut, rye, and bran breads all make delicious sandwiches.

TOMATO SALAD

Choose smooth, firm, medium-sized tomatoes. Wash and remove skin. Cut in eighths not cutting through the bottom, so that when laid upon a lettuce leaf or on a plate the sections will fall apart at the top and hold together at the bottom, forming a flower. Sprinkle with salt. Place a spoonful of salad dressing in the center. Whole canned tomatoes make a good winter salad. Chopped celery or diced cucumbers may be added.

CABBAGE SALAD

Shred cabbage, moisten with salad dressing, and serve on lettuce.

Variations.—Various fruits and vegetables combine nicely with cabbage. Those which add color are especially attractive:

1. Add small amount of green sweet pepper or pimento.
2. Add chopped raw carrots and peanuts.
3. Add chopped cooked beets.
4. Add diced apple and a little shredded coconut.
5. Add canned pears or diced pineapple.

POTATO SALAD

Boil potatoes with skins on. When cold, peel and cut in one-half-inch cubes. Moisten with mayonnaise or cooked salad dressing and serve on a lettuce leaf. Any of the following add a pleasing variety: a few drops of onion juice, a little chopped sweet pickle, chopped celery, diced cucumber, and cooked diced carrots or beets. Potato salad is often garnished with slices of hard cooked eggs. Shredded cabbage may be used instead of lettuce.

WALDORF OR APPLE SALAD

Combine equal amounts of diced apples and celery. The peeling may be left on the apple to add color. Moisten with salad dressing. Place on lettuce and sprinkle broken nut meats on top.

PRUNE SALAD

Drain the juice from cooked prunes. Remove the stones and stuff with grated or cottage cheese. Serve on a lettuce leaf with mayonnaise dressing.

USE OF CANNED FRUITS IN SALADS

Many delicious and attractive salads are made from canned fruits, such as peaches, pears, apricots, cherries, and pineapple. Canned fruit is often combined with fresh fruit. We may want a fancy salad for some special occasion. Have you ever seen a candle salad served at Christmas time? Guess how it would be made with sliced pine-apple, banana, and a cherry.

SANDWICH FILLINGS

Fillings may be grouped under various headings. Only one example is given here for each group but there is almost no limit to the different combinations which may be made.

Grind or chop the ingredients so that the fillings will spread easily. Moisten with enough salad dressing so it will spread but not soak into the bread. Add extra seasoning if needed.

Vegetable.—Ground carrots and cabbage moistened with mayonnaise dressing.

Fruit.—Ground dates and raisins moistened with dressing.

Nut.—Ground nuts moistened with honey.

Cheese.—Cottage cheese, chopped pimento and salad dressing.

Egg.—Chopped hard cooked egg and crisp bacon with salad dressing.

Fish.—Tuna fish with chopped celery and dressing.

Meat.—Ground ham, pickles and dressing.

THE CLUB PICNIC

Many clubs plan for a picnic sometime during the year. The following different kinds are suggestive:

Club member's picnic.—Only club members or members and their out-of-town guests may attend.

Father-daughter picnic.—Cooking Club members plan and prepare the picnic supper and invite their fathers. Every girl will want to do her part so well that each father will be especially proud of his daughter.

Club members, parents, and friends picnic.

Community picnic sponsored by the 4-H clubs.—The object of this picnic is to help the whole community become better acquainted with club work. The general committee is composed of representatives from each 4-H club in the community.

PLANNING THE PICNIC

A picnic is more successful if it is well planned ahead of time. The club appoints committees to take care of certain parts of the work. Program, supper, and recreation committees may be appointed. Suggestions for committees:

Program.—A leader for club songs; team demonstrations; one minute talks by club members about their projects; short talks by local people.

Recreation: Getting-acquainted games.

Supper. Plan 1: Each person or family brings what they expect to eat. Plan 2: Each brings a covered dish and then all is put together. Plan 3: The committee plans and assigns beforehand what each is to bring. There are advantages to each of these plans. With which plan do you think people would have the best lunch considering the standard set by our
food selection score card? One reason why children often become sick at picnics is that they eat too many rich foods. The third plan should help to avoid this. Below is a suggested menu for plan 3:

- Egg sandwiches
- Crisp bacon
- Whole-wheat nut-bread sandwiches
- Cabbage and carrot salad
- Fresh fruit
- Chocolate cookies
- Lemonade

PACKING THE LUNCH

Wrap sandwiches and cookies in oiled paper.
Slice bacon thin and wrap in heavy oiled paper. This is to be cooked over the camp fire.
Salad may be carried in a covered dish.
Wash the fruit before packing.
Put the lemon juice and sugar in fruit jars with tight lids. The fruit jar may be used for measuring water when making the lemonade. A granite pail and dipper are convenient for the lemonade.
Pack dishes, putting in a few extra for unexpected visitors. Mark silver so it is easily separated after supper. Paper plates and cups save carrying china dishes.

Have a good supply of paper napkins. Some may be needed to protect food from flies. It is a good plan to carry some clean newspapers or wrapping paper to spread on the grass or table even when a cloth is used.

RECIPE FOR A GOOD TIME

Be comfortably dressed. Wear neat clothing that is not easily spoiled.
Be sure everyone else is enjoying himself.
Get people to talking and playing games.
Forget to think about whether or not you are having a good time.

SIGNS OF GOOD HEALTH

Bright eyes. No dark circles under the eyes.
Clear, smooth skin of good color.
Glossy hair.
Strong, healthy teeth.
Unobstructed nasal breathing.
A full chest with good expansion.
A straight back, flat shoulder blades.
Firm flesh, good muscles.
A flat abdomen.
Straight legs.
Average weight for height, age, and type.
A good appetite.
Ability to sleep and rest well. Good nerve control.
Freedom from colds, headaches, indigestion, and constipation.
A happy, cheerful disposition.
Plenty of energy or "pep".

Anyone can give up but it takes a real 4-H club member to keep up and finish up.