Bread-Making Contest

FOR

Junior Home-makers' Clubs

BY

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THE STORY OF BREAD

The Work of the Farmer who plows the field, who sows the seed, who harvests the crops, who threshes the grain—

The Work of the Manufacturer who molds the plows, who makes the grain drills, who fashions the reapers and combined harvesters—

The Work of the Steel Mills which shape the rails, of the Shops which build the cars, and of the Railroads which haul the grain—

The Work of the Manufacturer who constructs the flour-mills, and of the Miller who rolls the grain into flour.

The Work of the Foundries which cast the stoves, and the shops which build the ovens—

ALL IS FOR AND TOWARDS ONE COMMON OBJECT — THE LOAF OF BREAD

Therefore, it is only when the LOAF OF BREAD is WELL MADE that all this wonderful sequence of labor and Skill that lies behind it is justified! And that Justification or lack of Justification rests as a high and splendid responsibility on the One Who Makes the BREAD.

NORMA J. DAVIS,
University of Nevada.
Have you a Junior Home-makers' Club in your district? During the last year many such clubs have been formed in Montana and have done splendid work in canning. The canning season is closed and many ambitious club members desire us to outline work for the winter months. To make a perfect loaf of bread is perhaps the greatest achievement in the culinary art and is an object worthy of any girl's best efforts. In this bulletin directions are given for organizing clubs to carry on work in bread-making. It is always easier and more interesting to work as a member of a group where all are interested in the same thing.

Four girls make a good number to organize into a club. Where there are not enough girls in the district to organize a club, the girls can carry on the work as individuals. It is the desire of the Junior Department of the Extension Division that every girl in Montana between the ages of ten and eighteen shall enter the bread-making contest. Where there are less than four girls in a community, they may register for the bread-making work as individuals; where there are four or more girls, it will be better to form a bread-making club.

Teachers, parents, and others who are interested in the work of the home and the development of the girls of Montana are urged to cooperate in the organization of Junior Home-makers' Clubs throughout the State.

To carry on this work effectively the groups of girls should be organized into clubs with a formally adopted constitution, with officers, a club motto, and perhaps a club pin. In some of the states the state wide club motto is, "To Make the Best, Better."

Montana clubs will adopt this motto for the present year. Can any club member think of a motto of our own to be used another year? Let all of us be thinking of it and next year a prize of five dollars will be paid to any club which can suggest a motto we like better for our Montana Junior Extension Clubs. The following plan for Junior Home-makers' Clubs will be followed this year in Montana.
Constitution.

Article I. Name.

The name of this organization shall be the Junior Home-makers' Club.

Article II. Object.

"To be something; to do something; to have something."

Article III. Members.

Any girl between the ages of ten and eighteen years may become a member by signing the constitution and agreeing to do the duties assigned to her in carrying on the work of the club.

Article IV. Officers.

The officers of this club shall be a president, a vice-president, a secretary, and a treasurer, who shall perform the usual duties of such officers.

Article V. Meetings.

The meetings of this club shall be held at such time as the club leader or the president of the club shall deem advisable.

Article VI. Leader.

The teacher in whose school the club is organized shall act as club leader whenever possible. When this is not possible, some properly qualified person in the community should be appointed by the County Superintendent of Schools or by the County Agriculturist, such appointment to be approved by the State Leader of Boys' and Girls' Clubs.

Article VII. Amendments.

This constitution may be amended at any regular meeting by a two-thirds vote of all the members.
By-Laws.

Section 1.

The club motto shall be: "To make the best, better."

Section 2.

The officers of the club shall be elected at the first regular meeting of each term and shall hold office until their successors have been elected and qualified.

Section 3.

The following order of business shall be followed at regular club meetings:

Meeting called to order by the president.
Roll call by the secretary.
Reading of minutes of previous meeting.
Report of committees.
Program.
Adjournment.
In most schools there will be a boys' club as well as a Junior Home-makers' club. It will probably be more interesting to hold joint meetings with the officers of one club presiding at one meeting and the officers of the other club presiding at the next meeting and with members from both clubs taking part in each program. Another plan that may be followed is for the boys' club to give one program and the Junior Home-makers' Club the next, etc. Below is given a type program to assist the committee in making out the programs. This would be given at the time designated "Program" in the regular order of business for club meetings.

Song—School and community. (By the end of the year both school and community should know the music and words of several of our patriotic songs, including the State song of Montana.)

A word from our club members (each member gives a quotation or a brief report of some topic of interest.) See suggestions given below.

Recitation—Club member.
Music by the Tiny Tots.
Short paper or talk by member of the Boys' Club.
Recitation by one of the pupils too young to be a club member.

Music.
Short paper or talk by member of Junior Home-makers' club.

Song—School and Community.
Short talk: Some man or woman in the community.
Recitation.
Music.

Note—None of the talks should be more than fifteen minutes long and from five to ten minutes is a better time.

Suggestions for "A word from our club members.”

Each club member may take a general topic and report on the news in his line at each club meeting. Another plan which may be followed is for one of these topics to be assigned for each meeting and for each member to find something along that line for that meeting. Below are some topics that are good to be used in this way.

Health notes.
Montana news.
Current events.
News from the war zone.
Our Army and Navy.
Montana legislature.
Developments in agriculture.
Our State institutions.
News in our county.
New books.
Home conveniences
Great pictures.
Great statesmen.
Great men and women of today.

It will add to the interest of the club program if the people of the community are invited to attend. The days of the club programs may be made days of community meetings. It is often a good idea to have the parents come at noon and bring a picnic dinner. Some of the regular work of the school can be placed on exhibition to be examined by the parents. After dinner the club meeting may be held, following the order of business given in section 3 of the by-laws of the club. Some person living in the community may then be called upon to tell of some line of work in which he or she has been especially successful. Does some man in your community raise especially good wheat? Is some man particularly successful in raising pigs? Has some one a flock of poultry that pays better than any other flock in the community? Can some one prepare home-cured meats better than any one else in the neighborhood? Can some woman make better bread than any of her neighbors? Get these people to tell how they do it!

These talks should merely supplement the program which is given by the boys and girls—not take the place of it. Below are given a few suggestive topics which may be used as subjects for short stories or short talks by the club members. The club members and club leader will think of many others. Much material of interest along these lines will be found in the histories, geographies, geographical readers, and in other supplementary reading work.

1. Sowing and reaping in olden times.
2. How our grandmothers baked their bread.
3. Going to market in other lands.
4. How grandfather threshed his grain.
5. Bread of many countries.
6. The kitchen of colonial days.
7. Can corn be grown in this country?
8. Selecting and testing seed corn. Its value.
10. How shall corn be cultivated in Montana?
11. Why boys and girls should join a club.
12. Selecting seed potatoes.
13. Cultivating seed potatoes.
14. Preparing the soil for potatoes.
15. Cultivating potatoes.
17. Why grow a garden?
18. How to be successful with a garden.
19. Why boys and girls should know how to can vegetables and fruit.
20. How to can vegetables.
21. The advantages of a trip to the State fair.

**BREAD-MAKING CONTEST.**

The bread-making contest carried on under the direction of the Division of Agricultural Extension of the Montana State College at Bozeman, will be one of the projects of the Junior Home-makers' Clubs of Montana. Girls who enter the bread-making contest should plan to enter other contests later.

**Contestants.**

Any girl who is ten years of age and under eighteen years of age October 1, 1917, may enter the bread-making contest for the year 1916-17. Any group of four or more girls, who are qualified as to age, may form a Junior Home-makers' Club to carry on the work of the bread-making contest. It is always more interesting to work in a club; but where there are not enough girls to form a club, any girls may enter the contest by complying with the conditions specified below.

**Classes of Contestants.**

The contestants shall be divided into two general classes, as follows:

**Class A.**

Class A shall include all girls who are ten years of age and under eighteen years of age on October 1, 1917, who are having or have had instruction in foods and cookery in schools, having a special instructor in that subject.

**Class B.**

Class B shall include those girls who are ten years of age and under eighteen years of age October 1, 1917, who are not having and have not had special instruction in foods and cookery.

**Plan of the Contest.**

1. Every girl who enters the contest must enroll in the Junior Department of the Division of Agricultural Extension of the Montana State college before beginning the work of the contest.
2. Agreement. As soon as the contestant's name is received, an agreement card will be sent to the contestant and as soon as she signs and returns this card, she is considered a formally enrolled member of the contest and may begin her work under the direction of the Junior Department of the Division of Agricultural Extension, Montana State College. Directions for work, report blanks, etc., will be sent the club member at once.

Agreement Card.

Number ___________________________ Class__________________________
County ___________________________________________________________
Date _____________________________ 191__________

I hereby make application for membership in the __________________________ Junior Home-makers' Club, and if admitted to membership will endeavor to perform all duties assigned to me to the best of my ability. I will strive to attend all meetings and take any part assigned to me in the programs. I wish to enter the bread-making contest and will perform all home work, submit prompt and accurate reports, and in general follow all instructions given by the Junior Department of the Division of Agricultural Extension of the Montana State College.

(Signed) _________________________________________________________

P. O. Address ___________________________________________________
Street Number
or R. F. D. ______________________________________________________

Date of birth _____________________________________________________

3. Any girl wishing to enroll in the contest can secure an agreement card from her teacher, from the county superintendent, from the county agricultural agent or from the Junior Department, Division of Agricultural Extension, Montana State College, Bozeman, Montana.

4. As soon as the card is signed, it should be sent to the Junior Department, Division of Agricultural Extension, Montana State College, Bozeman, Montana.

OUTLINE OF WORK FOR THE CONTEST.

Class A.

In Class A, the work shall be carried on under the direction of the teacher of home economics.

Home Work.

Each contestant shall bake bread at home or at school six times and shall each time submit a report of her work to the person in general charge of the work. The bread will be judged and the report
countersigned by the person in charge. The contestant will fill out that part of the report giving the details of her work. The teacher in charge will then judge the finished product, sign the report, and file the report. These reports will be sent to the Junior Department of the Extension Division immediately after the local contest is held. These reports will be made on blanks giving the following information:

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<tr>
<th>Name of contestant</th>
<th>P. O. Address</th>
<th>Street number or R. F. D.</th>
<th>County</th>
<th>Class</th>
<th>Name of club</th>
<th>Date of baking</th>
<th>Kind of yeast used</th>
<th>Amount of yeast used</th>
<th>Kind of liquid used</th>
<th>Amount of liquid used</th>
<th>Amount of flour used</th>
<th>Amount of fat used</th>
<th>Amount of sugar used</th>
<th>Number of loaves made</th>
<th>Time required for mixing</th>
<th>Time required for first rising</th>
<th>Time required for first kneading</th>
<th>Time required for second rising</th>
<th>Time required for second kneading</th>
<th>Time required for third rising</th>
<th>Time required for baking</th>
<th>Time required for entire process</th>
<th>Score of finished product</th>
<th>Perfect Score</th>
<th>Score of Loaf of Bread</th>
</tr>
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</table>

General appearance | 20% |

- Size (5)
- Shape (5)
- Crust (10)

Flavor | 35% |
Lightness | 15% |
Crumb | 30% |
- Character (20)
- Color (5)
- Grain (5)

Total | 100% |

I hereby certify that I know .................. to have done the work shown by the above report and that the report is correct.

(Signed) ..................

Person in charge of .................. Junior Home-makers' Club.

(10)
Before the local contest each girl will make an illustrated Bread Booklet into which she will put the answers to the questions given later in this bulletin. This may be called "The Book of Bread" or any other name she may choose. The booklets may be made very attractive by pasting into them pictures illustrating the answers to the questions. For example in connection with question 1, pictures of the Mexican women grinding the grain and mixing and baking the tortillas can be found quite easily. This will add much to the interest in the book and the booklets will make a very attractive item in school displays. These booklets will be kept by the club leader and will be sent immediately after the local contest to the Junior Department of the Division of Agricultural Extension. They will be kept on file in that Department until after the state contest when the Department will make such disposal of them as is deemed wise by the State Leader of Boys' and Girls' clubs. These booklets must be written in ink on paper nine inches by twelve inches. On the inside of the cover shall be the following:

Name .................................. Date ..........................
Class .................................. 
County..................................
P. O. Address ....................... 
Street number or R. F. D............... 

The outside of the booklet may be decorated in any way the contestant desires for we want to make the booklets as attractive as possible.

The booklets will be scored by the following score card.

Neatness ........................................... 20 points 
Speed and accuracy .......................... 15 points 
Good judgment ............................... 25 points 
Finished product ........................... 40 points 

Total ............................................. 100 points 

Where the school does not have adequate reference facilities and the girls are unable to find the answers to the questions, the Division of Agricultural Extension, Montana State College, Bozeman, Montana, will be glad to assist in getting the information if the girls will write asking for such help.

The best bread booklet submitted will be entitled to compete at the state fair for the prize offered for the best booklet.

Local Contest.

Before April 15 each club shall hold a local contest conducted by the local leader to determine who shall represent the club at the county contest. At this local contest, the girls shall be scored upon neatness, speed and accuracy, good judgment, and finished product,
according to the score card given for the county and state contests. The scoring shall be done by the teacher or by one or more disinterested persons chosen by the club with the advice of the teacher. Winners in the local contest will represent their clubs at the county contest.

County Contest.

The county contest shall be held some time between April 15 and June 10. Some member of the Division of Agricultural Extension of the Montana State College will, if possible, be present to conduct each county contest. If it is impossible for a member of the division to be present, a properly accredited substitute will be sent to conduct the contest. The county contest shall be a demonstration open to the public. In the county contests the contestants will be judged according to the following score card.

<table>
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<tr>
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<th>Points</th>
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<tbody>
<tr>
<td>Neatness</td>
<td>20</td>
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<tr>
<td>Speed and accuracy</td>
<td>15</td>
</tr>
<tr>
<td>Good judgment</td>
<td>25</td>
</tr>
<tr>
<td>Finished product</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100 points</strong></td>
</tr>
</tbody>
</table>

In scoring the bread, the score card given for scoring the finished product in the home work will be used.

Where the size of the counties makes it advisable, district contests can be held in various parts of the county and the winners of these district or sectional contests will then enter the county contest. This will be arranged at the discretion of the county superintendent, county agricultural agent, or other person who is acting as county leader.

Class B.

In Class B, the clubs shall be organized under the direction of the local public school teacher, or some responsible person or group of persons who will act as director of the club, such person to be approved by the Junior Department of the Division of Agricultural Extension. The home work, local contest, and county contests will be conducted the same as in Class A.

State Contest.

The state contest will be held in connection with the state fair at Helena next fall. One person from each county will have all expenses paid for a three-days' stay at the state fair so that she may enter the state contest. Arrangements will be made so that each girl will bake a loaf of bread in a public demonstration at the state fair. The details of this will be arranged and the contest will be conducted by the Junior Department of the Division of Agricultural Extension.
Extension of the Montana State College. The girls will be in charge of this department during the entire time they are in Helena. Arrangements will be made so that the girls will be met at the train when they arrive in Helena, will be properly supervised during their stay, and will be put on their trains home at the close of their stay. Instruction in home economics, sightseeing expeditions, and various other features of entertainment will be arranged for them during their stay in Helena.

Prizes.

Suitable prizes will be arranged for the winners of the state contest in each class.

BREAD AND BREAD-MAKING.

History of Bread.

Bread of some kind is used by every people and has been used since the earliest times of which we have any record. Among civilized peoples the bread is usually made by grinding some grain, fruit, nut or other product to a powder between two stones, mixing it with water, and baking it in hot ashes or between hot stones. Such bread is known as “unleavened” bread because there is in it nothing to make it light, or to “leaven” it. Many different products have been used by different peoples in making their bread. The early Britons used crushed acorns; the people of Syria used mulberries, dried and ground to a meal; the Scotch in early times made “oaten” cakes. The Greeks made the finest bread of any of the peoples of olden time but even their bread would not compare favorably with the bread we know today, for it was a hard, unleavened loaf made of barley and wheat. But light bread, or “leavened” bread has been known for many centuries, even before the time of the Egyptians, people had discovered that if they mixed a batter and allowed it to stand in a warm place exposed to the air, it would soon be filled with bubbles and when baked made a much more palatable loaf than the mixture of flour and meal, which was mixed and immediately baked. The next step toward the delicious loaf of light bread, with which we are all familiar today, was to save a lump of dough from one baking and put it into the mixture the next time bread was baked. This is the method referred to in the Bible when it says “a little leaven leaveneth the whole lump.” This method is sometimes used in distant camps where fresh yeast cannot be obtained. Many people living in Montana can remember when the second method was in common use in camp and we still hear miners and prospectors called “sourdoughs” because of this.

Bread leavened by these methods little resembled the fine, white loaf with its light, delicious crumb and golden brown crust which we find today on the tables in our American homes.
Questions.

1. What unleavened breads do we find in use in the world today?

2. Write a brief description of each, telling how it is made and where it is used.

Ingredients Used in Making a Loaf of Bread.

There are certain ingredients necessary in making a loaf of bread and other ingredients which are not necessary but which are commonly used.

The necessary ingredients are: flour, liquid, salt, and yeast; sugar and fat are commonly used but are not essential.

Flour.

Flour is made by grinding the kernels of various grains to a fine powder. In making wheat flour the outer coats of the kernel are removed as is also the germ. The portion which is left, called the endosperm, is then ground to form the fine white powder with which we are all familiar and which we know as flour. Different kinds of grains are used in the various types of bread especially in what are known as the "quick breads," but the flour almost universally used for making yeast bread, at least in the United States, is made from wheat. In certain parts of Europe a yeast bread is made from rye flour, but it makes a very heavy, solid, dark-colored loaf. When rye flour is used for yeast bread in this country, it is usually mixed with wheat flour to make it lighter.

Why does wheat flour make a better and more attractive loaf of bread than the flours from other grains? Did you ever chew "wheat gum"? If you have, you know that after the wheat kernels are chewed for a time a sticky, rubber-like mass resembling gum is left in the mouth. This substance is called gluten and it is because of this gluten that the loaf made with wheat flour becomes light when subjected to the action of yeast. Each girl should perform the following experiment.

Experiment to Determine the Composition of Flour.

Mix ½ cup of flour with enough water to make a stiff dough. Let this stand 30 minutes. Tie the ball of dough in a piece of cheesecloth and wash it in several waters, squeezing and working it with the hands. Save the water in which it is washed. When the water no longer becomes milky but remains almost clear, untie the cloth and gather up the sticky mass left on the cloth. This is the wet gluten. Squeeze out as much of the water as possible. Pull and stretch the gluten until it breaks, noting its strength. If you can get some pastry flour or some flour made from soft wheat, try the same ex-
periment with that. Study the gluten which comes from the two kinds of flour, noting differences in color, in stretching power, and in the ease with which the gluten breaks apart. Does this show you why we like flour made from hard wheat for bread and why it is easier to make good cakes and pies out of the flour made from soft wheat? Put the ball of gluten on a tin pan and bake it in a moderate oven. Does this show you why bread made with wheat flour will rise and become light? The gluten allows the walls of the tiny cells through the loaf to stretch without breaking; then the walls are hardened by the heat of the oven in baking and a light, fine loaf results. Corn is lacking in gluten and so when the walls of the cells are expanded by the development of gas, the walls break unless immediately hardened by heat and the cells collapse. For this reason only “quick breads” are made from corn meal. If we should try to make yeast bread from corn meal, where the cells have to stand for several hours while the bread is rising, the cells would collapse and the bread would be flat. Rye has some gluten and is sometimes used alone for bread but it gives a much flatter, more solid loaf than wheat. For making light bread we want a flour that is strong; that is, one that forms a tough, elastic gluten which will stretch without breaking.

But gluten is not the only thing we find in flour. In your experiment you started with a fairly large ball of dough and the gluten that was left after washing was only a small part of it. What is the substance you washed out of it? Allow the water in which you washed the dough to stand for a time until all of the solid particles have settled to the bottom. Pour off most of the clear water. Stir the remainder until you have a milky white liquid, then pour this liquid into a pan and heat it until it boils, stirring it all of the time. What is the substance that you washed out of the flour?

In addition to the gluten and starch which you have now proved are found in flour, there are certain mineral salts, a small amount of fat, and some water.

Since the gluten is a protein or tissue-building food, since the starch and fat are both fuel foods, and since mineral salts are necessary in the human body, it is easy to see why bread is called the “staff of life.” It supplies all of the different types of food that the body needs. When spread with butter or eaten with milk it forms an almost perfect food.

Good bread can be made from either hard or soft wheat flour but each must be handled very differently. Flour from hard wheat should be creamy in color, have a slightly granular feeling when rubbed between the fingers, and when a portion is squeezed in the hand, it should fall apart on opening the hand. Flour from soft wheat is somewhat whiter in color, has a soft velvety feeling (like cornstarch) when rubbed between the fingers, and when a portion is squeezed
in the hand it retains the print of the fingers when the hand is opened.

Questions.

3. Describe your experiment with flour?
4. What two substances did you prove to be present in flour?
5. What is the difference in the gluten from bread flour and from pastry flour?
6. Why does pastry flour make “short” pie crust and very tender cakes?

Yeasts.

Yeasts are plants so small that they cannot be seen without the aid of a powerful microscope. If you should examine a yeast plant you would find that it is a single tiny cell, sometimes nearly round, sometimes slightly oval. If the yeast were growing you would presently see a little swelling appear on the side of the cell. This is called a bud and it keeps on growing until it may be as large as the parent cell. By this time another bud may appear either on the old cell or on the new. The buds keep appearing, one after another, until there is an irregularly shaped mass of cells, all clinging together. After a while the cells drop apart and each cell starts a new group. This way of growing is called budding.

Growing yeast cells, showing method of budding and forming groups of cells. (From “Bacteria, Yeasts, and Molds in the Home” by H. W. Conn.)

Like all plants yeasts must have the proper conditions if they are to grow well. If you plant any kind of seeds you know that you must have certain conditions in order that they may grow. You must have a soil that gives the plant the food which it needs; you must have moisture, light, and air; you must have the proper temperature. For instance, corn grows best in a region where there are long hot summers, while wheat needs less heat but needs long hours of daylight for its best development.

Yeast must have the right conditions for growth the same as any other plant. Since it is a plant without green coloring matter, it does not need light for its growth, but it needs air, moisture, the
right temperature, and a soil containing the right kind of food the same as any grain, any vegetable or any flowering plant. It is upon the proper understanding of these needs and providing the proper conditions for the growth of the yeast that success in bread-making largely depends.

The food that yeasts require is sugar and the soil in which we plant the yeasts to provide them with this food is flour. In your experiments with flour you found that it is largely made up of starch. This starch can be changed into sugar by the yeast plants and it is by so changing some of this starch that the plants get their food and are enabled to grow. Sometimes we add a small amount of sugar when we start bread, in order that the yeast may have some food available at once without waiting to change the starch. By the time this sugar is used up some of the starch has been changed so that the growth of the yeast can go on rapidly from the first. Only a small amount of sugar is used, however, for we do not want the bread to taste sweet when it is finished. Two level teaspoonfuls of sugar to each cup of liquid is sufficient to start the growth of the yeast, yet not enough to cause the bread to taste of the sugar when finished.

Another condition necessary for the rapid growth of yeast is moisture. So long as the yeast plants are dry they do not grow and will slowly die. In addition to food and moisture the yeast must have air and for this reason we beat and knead bread to get into the mixture the air necessary for the growth of the yeast.

One of the most important factors in the growth of the yeast plant is the proper temperature. Yeast grows best if kept between 75° and 90° Fahrenheit. When yeast grows it produces a gas known as carbon-dioxide, and also a very small amount of alcohol. The alcohol is all driven off by the heat of the oven in baking so that not a trace of it remains in the bread after it is baked. The gas is imprisoned in the dough in tiny bubbles and it is because of this gas formed by the growth of the yeast that yeast makes bread light.

Experiment to Determine the Effect of Temperature upon the Growth of the Yeast Plant.

Divide a cake of dry yeast into four equal parts. Soak each portion in \(\frac{1}{4}\) cup of lukewarm water. Into each of four glasses put 1 teaspoonful of sugar, 4 tablespoonfuls of flour, \(\frac{1}{6}\) teaspoonful of salt, and 3 tablespoonfuls of water. Beat until smooth.

1. To the first glass add one portion of the softened yeast cake, beat until thoroughly mixed, then set the glass in a basin of water and keep the water at 85° Fahrenheit.

2. To the second glass add a portion of the softened yeast cake. Beat well, set the glass out of doors if it is winter or in a pan of ice-water if it is summer.
3. To the third glass add a portion of the softened yeast cake, but before adding it to the batter, boil the water in which the yeast cake is soaking. Cool to 85° Fahrenheit and keep at that temperature.

4. To the fourth glass add a portion of the softened yeast cake, set out of doors or in ice-water for 1½ or 2 hours, then set the glass in a basin of water at 85° Fahrenheit.

Examine and compare all four glasses every hour or two. If the experiment is performed at school, prepare the glasses before school in the morning and examine at recess, at noon, at the afternoon recess and again after school.

There are several different kinds of yeast plants, but the kind which is best for bread can now be obtained practically pure. Other kinds are found floating about in the air. These are called wild yeasts. Whenever fruit juice, batter, liquid, or semi-liquid, which contains sugar, is left exposed to the air, some of these wild yeast plants fall into it and cause it to ferment. When a dish of cooked fruit begins to "work" it is due to the growth of some of these wild yeast plants that have fallen into it from the air.

Yeast for bread is commonly used in one of three forms—compressed yeast, dry yeast, and liquid yeast.

**Compressed Yeast.** Compressed yeast is the most satisfactory form to use where one can be sure that it is fresh. Each cake of compressed yeast is a mass of living yeast plants sufficiently pressed to remove some of the moisture and then wrapped in tinfoil. Cornstarch or some other substance is often used to hold the mass in shape. Compressed yeast gives the quickest and surest action when used in bread-making, as all the plants are living, active, and ready to grow as soon as they are placed in the right conditions. The only difficulty in the general use of compressed yeast is its poor keeping qualities. When well wrapped and kept in a cool place it will keep several days or a week. Where mail is received every day any housewife can secure compressed yeast regularly. Where mails are irregular, it is better to use some other form.

**Dry Yeast.** Dry yeast is cultivated the same as compressed yeast but instead of being pressed into cakes with only enough cornstarch to hold them in shape, the yeast plants are first mixed with cornmeal or some other fine cereal. The mixture is then spread out, cut into cakes, and dried at a low temperature. This does not kill the yeast plants but they become inactive and remain in a "resting" state for some time. Gradually, however, they die and old yeast cakes do not give good results. In dry yeast we have the same kind of yeast plants, but instead of a mass of living plants ready to begin growing at once we find fewer plants and these in an inactive condition. Before they can begin active growth, they must be soaked and given food. For this reason we often place them in
a thin batter containing a small amount of sugar and allow to stand for some time before starting the bread mixture.

Liquid Yeast. Some bakers find it more satisfactory to use a liquid yeast than either the dry or compressed forms. Sometimes housewives can secure this yeast from the bakeshop but most housewives who use a liquid yeast make it themselves. This yeast is often called a “starter.” It is a mixture of flour, water, and potatoes, with a portion of dry yeast added. This mixture gives the food which the dry yeast plants need and they soon become active and multiply rapidly. This yeast, therefore, provides active yeast plants and the bread rises more quickly than when the dry yeast cake is added directly to the bread. A portion of the starter is kept over from one baking to the next, new food being added each time, usually in the form of potato water and sugar. The chief objection to the use of yeast in this form is the temptation to keep it too long. Where it is used, fresh yeast should be made frequently and the dish in which it is kept should be emptied and scalded often. If this is not done bacteria are very liable to get into the yeast and grow producing a very unpleasant flavor and odor in the bread.

Questions.

7. Write down carefully the results you noted in the experiment with the growth of yeast at various temperatures.
8. What is the effect of boiling upon yeast?
9. What is the effect of low temperatures upon the growth of the yeast plant?
10. What will you do if your bread gets chilled?
11. What do you think will be the effect upon the bread?
12. At what temperature will you keep your bread during the whole process of rising?

Liquids Used in Bread-making.

The liquids most commonly used in making bread are water, milk, potato water, whey, or butter-milk. No liquid gives a better flavor than water. Milk and potato water slightly increase the food value of the bread, improve the keeping quality, make the crumb a little more tender, and give a little better color to the crust. The potato water adds a small amount of potato starch, a food that the yeast plants can use a little more easily than the starch in the flour, and also adds mineral matter and some protein. But if the potatoes are old, too young, or are not well washed, the potato water may make the bread dark-colored, especially if a liquid yeast made with potatoes has been used. Where liquid yeast is used it is probably better to use water or a mixture of water and milk for the liquid. Buttermilk and whey have much the same effect as milk or potato
water, but if not fresh or if too sour are apt to leave an unpleasant flavor in the bread.

Salt.

Salt has certain antiseptic qualities but if used in too large amounts will hinder or even entirely stop the growth of the yeast. If one level teaspoonful for each cup of liquid is used, both the flavor and texture are improved. If more than this is used, the loaf is heavier, the crust is not so good in color, and the crumb loses in texture, flavor and tenderness.

Sugar.

Sugar serves as a food which is immediately available for the yeast plant and so hastens fermentation. If too much is used, however, it seems to make both the crust and crumb somewhat tough. Two level teaspoonfuls to one cup of liquid seem to be the best proportion. When this amount is used, the volume of the loaf is slightly increased, the fermentation is somewhat hastened, and the color of the crust is decidedly improved.

Fat.

Shortening when used in small amounts is thought to make the crumb a little more tender and to prevent the bread from drying out. If too much fat is used, the loaf is apt to be heavy. Some people use no shortening but one or two teaspoonfuls to a cup of liquid is believed by most authorities to improve the crumb in texture and tenderness.

GENERAL DIRECTIONS FOR MAKING BREAD.

Utensils.

Measuring cup
Mixing bowl
Teaspoon
Tablespoon
Spatula
Flour sifter
Bread pan
Moulding board
Thermometer

Most of these utensils are found in every home. It is desirable to have a regular measuring cup with the divisions marked on it. The only utensil which you may not have at home is a thermometer. Each girl who enters the contest should have one if possible, as it makes the work much more accurate. An ordinary dairy thermometer can be purchased for about thirty-five cents and you
will find that it is money well invested. It is always better to bake each loaf of bread in a separate pan even though one is making several loaves at a time. When several loaves are put into a large pan, it is almost impossible to secure thorough baking to the center of the loaf without having the crust overdone or the outer portion of the loaf rather dry. Perfect baking of both crust and center of the loaf is most easily secured with a pan which is about $8\frac{1}{2} \times 3\frac{1}{2} \times 3$ inches. It is better to have the pan slightly larger at the top than at the bottom. Tin pans seem to give uniformly satisfactory results in the baking and are the least expensive in their first cost.

**Measuring.**

All measurements are level. Flour should be sifted once, then dipped into a cup and leveled off with the back of a knife or with a spatula. In measuring a teaspoonful or a tablespoonful of any ingredient, the substance is dipped up on the spoon and leveled with a knife or spatula. For one-half spoonful, measure a level spoonful, then divide lengthwise of the bowl with a spatula or a knife; to measure one-fourth spoonful, divide the one-half spoonful crosswise of the bowl. In measuring dry materials do not pat down nor shake down the substance. There is always a temptation in beginning the work to shake the cup of flour slightly or to pat down the substance in a spoon. Such measures are not accurate. Simply clip up a heaping spoonful of the substance or fill the cup to overflowing by dipping the flour into it with a spoon and then level it off with the edge of the knife or spatula. In measuring fat, the substance must be packed into the cup or spoon so that the corners of the cup or the bowl of the spoon is filled and then level off with the knife or spatula.

\[
\begin{align*}
tsp. &= \text{teaspoonful} \\
tbsp. &= \text{tablespoonful} \\
c. &= \text{cupful} \\
qt. &= \text{quart} \\
pt. &= \text{pint}
\end{align*}
\]
Directions for Making Bread.

I. Short Process.

By this process bread may be made in from 4 to 6 hours. However, it requires compressed yeast and so can be used only where this yeast can be secured fresh.

Proportions for 1 loaf

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>½ c. water</td>
<td>2 tsp. sugar</td>
</tr>
<tr>
<td>½ c. milk</td>
<td>1 tsp. fat</td>
</tr>
<tr>
<td>1 tsp. salt</td>
<td>½ cake compressed yeast</td>
</tr>
<tr>
<td>3 to 3½ cups flour (about)</td>
<td></td>
</tr>
</tbody>
</table>

Note: It is impossible to give the exact amount of flour to be used as some kinds of flour absorb more liquid than others. The amount used will vary from 3 c. of flour to nearly 4 c. of flour for each cup of liquid.

Directions.

Boil the water and measure after boiling. Scald the milk, i. e., heat until it steams (until a scum or "skin" forms on top) or until bubbles appear around the edge of the pan. This is done to destroy bacteria which might be present in the water and milk and by their growth spoil the flavor of the bread. Add the milk to the boiled water. Scald the yeast in ¼ c. of water which has been boiled, then cool to 90° Fahrenheit. (This is to soften the yeast cake so that it will mix evenly all through the bread mixture.) Put the sugar, salt, and fat into a bowl and to them add the rest of the liquid. Cool to 90° Fahrenheit, add the yeast and add flour to make a batter. Beat well. Add enough flour to make a dough which can be handled without sticking to the hands or to the kneading board. Knead lightly but thoroughly until the ingredients are all thoroughly mixed and the whole mass has a springy, elastic feeling. Put into a bowl which has been warmed and then greased slightly. Grease the bread very lightly over the top on the outside of the mass of dough. This is to prevent a crust forming. The same thing may be accomplished by covering the bowl with a closely fitting cover. Where this is done the bread need not be greased and many good bread-makers prefer this method. It avoids the danger of the heavy streaks through the loaf which are sometimes found where the bowl or loaf is greased too much and then the bread not kneaded sufficiently to evenly distribute this fat through the dough. Grease the dough very lightly over the top and cover with a clean tea towel. Set the bowl into a pan of warm water (about 95° Fahrenheit) and let stand until the bread has doubled in bulk.
When the bread is well risen, take it out on the kneading board and knead well. The first kneading is to thoroughly mix the ingredients, to mix the yeast evenly through the whole mass of dough, to make the gluten formed in the flour smooth and elastic, and to incorporate the air which is necessary for the growth of the yeast plants. The bread is kneaded the second time to distribute the gas bubbles evenly through the mass of dough and to shape the dough into loaves ready for baking. If the bread has been properly handled and the proper amount of flour has been used, it will not be necessary to use any flour on the board for the second kneading.

After the bread is kneaded and shaped into loaves, put it into greased baking pans. Place the pans in water at 95° Fahrenheit if they do not leak. If the pans leak, they may be set in a warm place. Be careful that the water is not too hot and if the pan must be set on the warming oven or in some other warm place, lay a thermometer beside the pan so that you may be sure that the bread does not get too hot on the bottom or along one side. Sometimes when bread is set on a warming oven the yeast plants in the bottom of the dough and along the side next the stovepipe are killed, leaving a heavy, dark streak at the bottom and side of the loaf. When bread is set on a radiator an asbestos mat or heavy board should be placed under it to prevent overheating the bottom of the loaf.

When the bread in the pan has doubled in bulk it is ready for baking. To test the oven, place in it a piece of white paper. If the oven is at the right temperature the paper will become a golden brown in five minutes. The bread should begin to show little brown flecks after it has been in the oven ten minutes and should be fairly well browned at the end of fifteen minutes. Bake from forty-five minutes to one hour, lowering the temperature slightly the last twenty minutes. If you have a reliable oven thermometer, it should register a temperature of 360° Fahrenheit, when the bread is put into the oven, should slowly rise to 428° Fahrenheit, and then be slightly lowered during the last twenty minutes. The thermometers on oven doors do not always indicate accurately the temperature of the center of the oven. If you have a range with such a thermometer note the temperature which gives the best results and govern the oven accordingly in your future work. The paper test is given as a guide in using those ovens which have not a more accurate guide.

When the bread is done the crust is a golden brown all over the loaf, the bread has shrunk slightly from the sides of the pan so that it comes out of the pan easily, the sides when lightly pressed together immediately spring back into place, and when the loaf is tapped lightly with the finger it gives a hollow sound.
Care After Baking.

After bread is baked it should be removed from the pan at once and placed on a wire screen or across the pan so that the air can circulate freely about it. Spread a clean tea towel over it to keep off dust, but do not wrap. Some people like to brush the crust with fat, but this detracts from the crispness of the crust and (if too much fat is used) makes the crust greasy.

II. Long Process.

\[
\begin{align*}
\frac{1}{3} \text{ c. milk} & \quad 1 \text{ tsp. fat} \\
\frac{1}{2} \text{ c. water} & \quad 1 \text{ tsp. salt} \\
2 \text{ tsp. sugar} & \quad \frac{1}{4} \text{ cake dry yeast} \\
3\frac{1}{2} \text{ c. flour (about)} & \\
\end{align*}
\]

Soak the yeast for 2 hours in \(\frac{1}{4}\) c. of water which has been boiled and cooled until it is lukewarm. Scald the milk and add it to the water which has been boiled as in the short process bread. Put the fat, salt, and sugar into a bowl and pour over them the hot liquid. When lukewarm, add the yeast and enough of the flour to make a batter (about \(\frac{1}{2}\) c.). Beat well to thoroughly mix the ingredients and to incorporate air. Allow to stand (keeping at a temperature of about 85\(^\circ\)) until light and full of bubbles. This will take several hours and bread made by this method is usually started at night and allowed to stand "in the sponge" until morning. In the morning add flour to make stiff enough to knead and then proceed exactly as in the short-process bread.

III. Liquid Yeast Process.

Directions for Making Liquid Yeast.

3 medium sized potatoes, 1 tbsp. flour
1 tbsp. sugar, \(\frac{1}{2}\) tbsp. salt
few grains ginger, \(\frac{1}{2}\) dried yeast cake

Cook the potatoes in as little water as possible. Put through sieve; add flour, sugar, and salt. When cool add the yeast cake, which has been soaked in tepid water. This is good yeast to use when compressed yeast cannot be obtained.

Bread With Liquid Yeast.

\[
\begin{align*}
\frac{1}{2} \text{ c. milk} & \quad 1 \text{ tsp. fat} \\
\frac{1}{2} \text{ c. water} & \quad 1 \text{ tsp. salt} \\
2 \text{ tsp. sugar} & \quad \frac{1}{2} \text{ c. liquid yeast} \\
3\frac{1}{2} \text{ to 4 c. flour (about)} & \\
\end{align*}
\]
Add the scalded milk to the boiled water. Pour this over the salt, sugar, and fat. Let stand until lukewarm, add the yeast, and then proceed exactly as in the short-process bread. It will probably take a little more flour as there is some extra liquid in the yeast. \( \frac{3}{4} \) c. of this yeast is equivalent to \( \frac{1}{2} \) cake of compressed yeast. Bread made by this method may be started in the morning and finished early in the afternoon, the same as bread made with compressed yeast.

Questions.

13. Why do we boil the water and scald the milk in making bread?

14. What conditions will provide for the growth of the yeast plant in making bread?

15. How does yeast "leaven" bread?

16. Why is it not a good plan to wrap bread tightly in a cloth or to leave it in the tins after it is baked?

Experiments to Determine Best Way to Care for Bread.

Cut four pieces of bread each about two inches square and one inch thick.

1. Slightly moisten one piece, put it on a plate, turn a glass over it, and set it in a warm, dark place.

2. Slightly moisten the second piece, put it on a plate, turn a glass over it, and set the plate in the sunshine.

3. Dry out the third piece in the oven, having the temperature moderate and heating it long enough so that the bread is thoroughly dry. This is like the "twice-baked bread" or zwieback which the Germans use so much. Put this on a plate, turn a glass over it, and set it beside the first piece in a warm, dark place.

4. Moisten the fourth piece slightly, place it in a glass (not inverted) and set it in a warm place. The place need not be dark but should not be in direct sunlight. Do not cover the glass. Let all four glasses stand for a week, examining them every day.

Questions.

17. Describe each of the above pieces of bread at the end of three days and again at the end of a week.

18. What conditions are necessary for the growth of mold?

19. What sort of a place do you consider the best for keeping bread?

20. Would you keep bread in the cellar or in the pantry? Tell just why.

21. Where bread is kept in a stone jar, how would you cover the jar?
22. Why is not a tightly closed tin box a good place to keep bread?
23. Can you think of any way such a box could be fixed to make it perfectly satisfactory?
24. Why is not a wooden bin a good place to keep bread?

Some Common Faults in Bread.

1. If the bread has little burned blisters on top, the oven was too hot at first.
2. The bread should have a golden brown crust all over the loaf. If it is golden brown in places but is too light or too dark in other places, the oven does not bake evenly and the bread should be turned at intervals while baking to secure the proper color over the whole loaf.
3. If the bread rises higher on one side than on the other and cracks along the side, it shows that the dough had too much flour or that the oven does not heat evenly. If it is due to the oven, it may be corrected by frequently turning the bread while baking.
4. If the bread runs over the sides of the pan, either the dough did not have enough flour, the oven was too light, or the tin was too full.
5. If the bread has large, uneven holes it may be due to any one of several causes. Perhaps the bread was allowed to rise too long before baking; perhaps the dough was not stiff enough; perhaps the oven was too cool and the bread rose too much in the oven. If they occur only in the upper part of the loaf, just below the crust, your oven was probably too hot at first.
6. If the bread is sour you need to consider several factors:
   a. Was the yeast fresh and of good quality?
   b. Did your sponge rise and then fall before you mixed it into dough?
   c. Did your bread get too warm (above 95° Fahrenheit) while rising?
   d. Did your bread get too cold (below 75° Fahrenheit) while rising and so take a long time to rise?
   e. Did your bread stand too long before baking?
7. Heaviness or doughiness may be due to insufficient rising; poor flour (that is, flour which does not absorb water readily), or to the dough being too soft, that is, too little flour used in proportion to the liquid.
8. Heavy streaks through the bread may be due to:
   a. Too much fat on the outside of the dough. The fat
is put on to prevent a crust forming but if too much is used, it is apt to cause heavy streaks through the bread.

b. Overheating the sides and bottom of the dough and thus killing the yeast plants.

c. Carelessness in shaping the dough into loaves. Where the dough is creased and folded under with the hands in order to make the loaf a good shape on top the creases and folds can be traced after the bread is baked by heavy streaks through the loaf. Roll and pat it into shape on the board instead of folding it over while holding it in the hands.

9. If the bread forms a crust over the dough while rising the first time this crust breaks up into little pieces when the dough is kneaded the second time and these particles appear as little hard spots through the loaf after it is baked.

SCORE CARD FOR JUDGING A LOAF OF BREAD

The following score card and explanation of the score card are taken from the Bulletin "Some Points in the Making and Judging of Bread," by Miss Mabel Bevier of the University of Illinois. This score card has been adopted as a standard by a number of states and is the one which will be used by the Extension Division of the Montana State College in judging the bread baked in the breadmaking contest of the Junior Home-makers' Clubs.

REVISED SCORE CARD OF MISS BEVIER

<table>
<thead>
<tr>
<th>General appearance</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size (5)</td>
<td></td>
</tr>
<tr>
<td>Shape (5)</td>
<td></td>
</tr>
<tr>
<td>Crust (10)</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td></td>
</tr>
<tr>
<td>Character</td>
<td></td>
</tr>
<tr>
<td>Depth</td>
<td></td>
</tr>
<tr>
<td>Flavor</td>
<td>35</td>
</tr>
<tr>
<td>Odor</td>
<td></td>
</tr>
<tr>
<td>Taste</td>
<td></td>
</tr>
<tr>
<td>Lightness</td>
<td>15</td>
</tr>
<tr>
<td>Crumb</td>
<td>30</td>
</tr>
<tr>
<td>Character (20)</td>
<td></td>
</tr>
<tr>
<td>Coarse — Fine</td>
<td></td>
</tr>
<tr>
<td>Tough — Tender</td>
<td></td>
</tr>
<tr>
<td>Moist — Dry</td>
<td></td>
</tr>
<tr>
<td>Elastic or not</td>
<td></td>
</tr>
<tr>
<td>Texture</td>
<td></td>
</tr>
<tr>
<td>Color (5)</td>
<td></td>
</tr>
<tr>
<td>Grain—Distribution of gas (5)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

(27)
EXPLANATION OF SCORE CARD

General appearance is placed first simply because it comes first in order of impressions which the loaf makes upon the eye. Moreover, in judging a loaf one cuts it and thereby may destroy its shape.

Crust. The color and character of the crust enter into the general appearance and are, therefore, grouped with it. The characteristics of a good crust may be summarized as follows: Brightness of bloom or color, crisp, crackly, pliable, and smooth, (coarse, grainy crust means bad molding.)

Flavor. In all the early work of bread, it seemed most desirable to emphasize flavor because there was so much bread that looked very well and yet was really sour both in odor and to the taste. Moreover, the author feels that emphasis should be put on flavor in all foods. The teacher habit acquired through the years of teaching inclines her to indicate at once as "below passing" or unworthy of further consideration, any bread that is conspicuously "off" in flavor. Flavor is made up of the two elements, odor and taste. A well trained nose will detect in the freshly cut loaf the lack of flavor or the approach to sourness before it can be detected by taste.

The degree of fermentation, the quality and condition of the flour, and the amount and character of the added substances all modify flavor, but the ideal is the flavor obtained by chewing the wheat grain.

Lightness. This is a quality best shown in the loaf though made up of many elements. It is often judged by size, by apparent weight, by presence or absence of holes, by crumbliness, and these points do enter into the judging of lightness. Possibly the volume per weight of materials used would be more correct, but it is not easy for the home-maker to determine volume.

Crumb. A very large part of the value of a loaf of bread is determined by the condition of the crumb. The author has given the points in judging the crumb in great detail because in previous work she has found much confusion regarding the term texture. The Book of Bread gives the following definition for it: "Texture can be defined as being the disposition or connection of interwoven threads or fibers," and again, "a loaf to be of good texture must not only be of fine and regular mesh but also of soft, pliable and springy crumb, that is, not coarse to look at, nor hard or unyielding to the thumb when pressed, nor yielding too much."

If a thin slice of bread be looked at by placing it between the observer and the light, the mesh and distribution of the gluten walls can be seen easily.
Grain. There is very general agreement that by grain is meant the distribution of gas cavities, also their size and number. This, too, may be seen in the thin slice when examining the texture. Elasticity is perhaps best shown in the half loaf by pressing the cut edges together and seeing if they resume the original position when the pressure is removed.

Lesson I.

Subject: Bread and Bread-making.

Aim of Lesson. To make a perfect loaf of bread.

Assignment. Study the bulletin from “History of Bread” down to “Ingredients used in Making a Loaf of Bread.” Also study the different methods of making bread from “Directions for Making Bread,” to “Experiments to Determine the Best Way to Care for Bread.”

Practical Work. After carefully studying the directions and the three methods of making bread, decide which method you can use to best advantage and make a loaf of bread at home. If you can get compressed yeast, it would be better to use Method I, as this is the method which will be used at the State Fair. If you must use the dry yeast cakes, it will probably be better to make a liquid yeast with the yeast cake and then use Method III. In using this method it will be best to make your liquid yeast Friday morning and then start your bread Saturday morning, but the contestant must carry the whole process, i.e., must make her own liquid yeast, not use a portion of her mother’s “starter.”

Booklet Work. Answer questions 1 and 2. It would be interesting to copy the report of your practical work into your notebook also.

Lesson II.

Subject: Flour.

Aim of Lesson. To determine the different substances found in flour and to determine what kind of flour is best to use in bread-making.

Assignment. Study the bulletin from “Ingredients Used in Making a Loaf of Bread” to “Yeasts.”

Practical Work. Perform the experiments to determine the composition of flour described in the bulletin. Bake a loaf of bread either at home or at school.

Booklet Work. Answer questions 3, 4, 5, and 6. If you so desire, copy your report of the second loaf of bread you baked.
Lesson III.

Subject: A Study of Yeast.

Aim of Lesson. To determine the effect of the growth of yeast on bread and the conditions which affect the growth of the yeast lants.

Assignment. Study the bulletin from “Yeasts” to “Liquids Used in Bread-making.”

Practical Work. Perform the experiments to determine the effect of various conditions upon the growth of the yeast plant.

Booklet Work. Answer questions from 7 to 12 inclusive.

Lesson IV.

Subject: Other Ingredients Used in Bread-making.

Aim of Lesson. To make a more nearly perfect loaf of bread than before and to study the effect of the various kinds of liquid and of salt, sugar, and fat upon the quality of bread.

Assignment. Study the bulletin from “Liquids Used in Bread-making” to “Directions for Making Bread.”

Practical Work. Make a loaf of bread at home or at school.

Booklet Work. Write a short composition telling what faults you found in your first loaf of bread and how you corrected these faults the second and third times you baked bread.

Answer questions 13 to 16 inclusive.

Lesson V.

Subject: Care of Bread After it is Baked.

Aim of Lesson. To determine the best way to care for bread in the home.

Assignment. Study the bulletin from “Experiments to Determine the Best Way to Care for Bread” to “Score Card for Judging Bread.”

Practical Work. Perform the experiments to determine the best way to care for bread.

Booklet Work. Answer questions 17 to 24 inclusive.

Lesson VI.

Subject: A Perfect Loaf of Bread.

Aim of Lesson. To learn to judge bread and to know what a perfect loaf of bread is.

Assignment. Study the bulletin from “Score Card for Judging Bread” to the end of the bulletin.

Practical Work. Each girl bake bread at home and bring her loaf to school to be judged by the club. The loaves should be
brought in wrapped and given to the teacher. She will then un-wrap them and put a number on each one so that the girls will not know whose bread is being judged.

**Booklet Work.** Copy the score of the best loaf of bread. Write a description of this loaf telling in what points it was good and how you would correct the faults found in scoring it.

**NOTE—** These lessons do not give the six bakings required by the contest and each girl must bake enough more times to fulfill the requirements of the contest.

**REFERENCES.**


“Foods and Sanitation,” Forster and Weigley; Row, Peterson & Company, Chicago, Ill. Cost, $1.00.

“Textbook of Cooking,” Carlotta Greer; Allyn and Bacon, Chicago, Ill. Cost, $1.25.
