## UNIVERSITY OF IDAHO

COLLEGE OF AGRICULTURE
EXTENSION DIVISION
E. J. Iddings DIRECTOR

## Food Preparation and Food Facts <br> FIRST AND SECOND YEAR BREAD AND NUTRITION CLUBS

Cooperative Extension Service in Agriculturpand Home Economics of the State of Idaho University of thefio College of

Agriculture and United Styterf Departarent of Agriculture Coopeggtng

BOYS' AND GIRLS' CLUBS

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## IDAHO CLUB PLEDGE

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I pledge my head to clearer thinking,
My heart to greater loyalty,
My hands to larger service,
And my health to better living
    For my Club, my Community and my Country.
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## *REQUIREMENTS FOR BREAD CLUBS

The following bakings are required of the bread club members for completion of a year's work. Much more than this should be done in order to gain proficiency. An account of each baking should be entered in the record book in order that the final report may show a complete summary of the year's work.

## FIRST YEAR BREAD CLUBS

Total of 18 bakings: 9 bakings of quick bread, including at least 3 bakings of corn bread and 3 of biscuit, 3 to be scored by local leader and entered in final report; 9 bakings of yeast bread, 3 to be scored by local leader and entered in final report.

SECOND YEAR BREAD CLUBS
Total of 24 bakings : 9 bakings of quick bread of at least 3 varieties; 9 family bakings of yeast bread, 3 to be scored by local leader and entered in final report; 3 bakings of variations of yeast bread, as cinnamon rolls, Parker House rolls, coffee cake, (they may be made at the time the family bakings of yeast bread are made, using part of the same dough) ; 3 bakings of any kind of bread desired.

[^0]
## ARITHMETIC OF THE MIXING BOWL

## BATTERS AND DOUGHS

Thin batter-Equal parts liquid and flour. ExamplePopovers, griddle cakes, waffles.

Pour Batter-One-half as much liquid as flour. Ex-ample-Muffins, cake, drop biscuit.

Soft Dough-One-third as much liquid as flour. Ex-ample-Cut biscuit.

Stiff Dough-One-fourth as much liquid as flour. Ex-ample-Bread.

These proportions will vary somewhat with different kinds of flour. The only way to learn consistency of batters and doughs is by repeated experience.

## SHORTENING

Muffins-One tablespoon of fat to a cup of flour.
Biscuit-One to two tablespoons of fat to a cup of flour.
Pastry-Four to six tablespoons of fat to a cup of flour.
Cakes-One-fourth to one-half as much butter as sugar.

## LEAVENING

Two teaspoons baking powder to a cup of flour.
One-half teaspoon soda to a cup of sour milk or molasses (not syrup).

One teaspoon baking powder to a cup of flour is sometimes added when soda and sour milk are used. This is true if the milk is only slightly sour.

When beaten eggs are used in a mixture the amount of baking powder is usually decreased by one-half teaspoon of baking powder for each egg used.

## CLASSIFICATION OF BREADS

## I. QUICK BREADS

Quick breads are those made porous or "light" by leavening agents other than yeast. These are air, steam and gas. Air is incorporated in the mixture by beating or by adding beaten white of egg. The liquid in the mixture turns to steam on heating and helps to lighten the product. Gas is produced by dissolving an acid and soda together. The acid may be lactic acid in sour milk, the acid in molasses, cream of tartar, acid phosphate and the like. The
latter are in powdered form and when mixed with soda and a little starch make baking powder. This must be moistened in order to release the gas.

## II. YEAST BREADS

The rising of yeast bread is due to the gas given off by the yeast plants. These plants grow and multiply very rapidly. They are killed by thoro baking of the bread.

Yeast bread is classified by the time required in making as:

1. Short Process Bread is made by using a large amount of yeast. Usually compressed yeast is used. The bread is made stiff at the first mixing.
2. Long Process Bread is made into a sponge at the first mixing. This is usually set the night previous to baking.

## DIRECTIONS FOR MEASURING

Correct measurements are essential in getting the proper proportions of ingredients. In case of dry ingredients, "full" means that the measure is level full, and this measurement is obtained by scraping over the top with the flat edge of a knife, thus removing all excess. One-half spoonful is obtained by taking a spoonful and cutting thru lengthwise of the bowl and scraping the extra half away. One-fourth spoonful is obtained by dividing the half. A measure is full of liquid when it will hold no more.

## TABLE OF EQUIVALENTS AND ABBREVIATIONS

$$
\begin{aligned}
& 3 \text { teaspoons (t.) equal................................ } 1 \text { tablespoon (tb.) } \\
& 16 \text { tablespoons (tb.) equal } \\
& 1 \text { cup (c.) } \\
& 2 \text { cups (c.) equal.................................................... } 1 \text { pint (pt.) } \\
& 2 \text { cups (c.) butter equal.................................... } 1 \text { pound (lb.) } \\
& 4 \text { cups (c.) flour equal..................................... } 1 \text { pound (lb.) } \\
& 2 \text { cups (c.) granulated sugar equal............... } 1 \text { pound (lb.) } \\
& 2 \text { tablespoons (tb.) butter equal..................... } 1 \text { ounce (oz.) } \\
& 2 \text { tablespoons (tb.) liquid equal....................... } 1 \text { ounce (oz.) } \\
& 4 \text { tablespoons (tb.) flour equal......................... } 1 \text { ounce (oz.) } \\
& \text { QUICK BREADS }
\end{aligned}
$$

Baking powder is the leavening agent used in most of the following recipes. A more uniform product is secured by the use of baking powder and sweet milk than with soda
and sour milk. However, soda and sour milk may be substituted in any of the recipes, allowing one-half teaspoon of soda to each cup of sour milk. If the milk is very sour, a little more soda may be used; if only slightly sour, decrease the amount of soda and add baking powder. In most products where soda and sour milk are used, the addition of one teaspoon of baking powder to each cup of flour used will improve the texture of the product.

PLAIN MUFFINS

| 2 c. flour | 1 egg |
| :--- | :--- |
| 4 t. baking powder | 1 c. milk |
| $1 / 2$ t. salt | 2 tb. melted fat |
| 1 tb. sugar |  |

Mix and sift the dry ingredients. Add the milk to the beaten egg and stir the mixture into the dry ingredients. Add the melted fat and beat the mixture well.

## VARIATIONS

For graham muffins substitute graham flour for onehalf the flour in plain muffin recipe. For corn muffins substitute cornmeal for one-half the flour.

Cooked cereal can be used in muffins. Rice is especially good. Let one cup of cooked cereal take the place of one-half cup of flour. Adjust the amount of liquid required to make of right consistency. Usually about one-half the liquid that is called for in the plain muffin recipe will be needed.

## NUT BREAD

| $1 / 2$ c. sugar | $11 / 4$ c. milk |
| :--- | :--- |
| 1 egg | 4 c. sifted flour |
| 1 t. salt | 4 t. baking powder |
|  | 1 c. chopped nuts |

Beat the eggs in mixing bowl, add sugar, beat again. Add dry ingredients alternately with milk. Add nuts and allow to stand 20 minutes in warm place. Bake in moderate oven 40 minutes.

## BRAN BREAD

2 c. bran
3 c. white flour
$1 / 2$ c. sugar
Stir all together. Add cold water or sweet milk to
make a stiff batter. Beat thoroly. Bake in loaf bread pan one hour.

## BAKING POWDER BISCUITS

Beginners will usually have much better success if they will make drop biscuit several times before attempting rol-led-out biscuits. Use the following recipe, adding sufficient liquid to make a stiff batter. Avoid too much stirring after the liquid is added. Drop by spoonfuls onto buttered pans and bake the same as cut biscuits.

2 c. flour
$1 / 2 \mathrm{t}$. salt
$2 / 3$ to 1 c . milk or water
Mix the dry ingredients; cut in the shortening thoroly with two knives or mix lightly with finger tips; add the milk gradually until a soft dough is formed, stirring as little as possible. Turn out on the board, using flour to prevent sticking. (Avoid having dry flour adhere to the surface of the biscuits.) Roll or pat to about three-quarters of an inch in thickness, cut with rather small cutter. Bake 10-15 minutes.

After some proficiency has been gained in handling biscuit dough, try adapting it to various uses such as apple dumplings and short cakes.

## ESSENTIALS IN YEAST BREAD MAKING

In making bread, the first thing to be considered is good materials, without which it is impossible to get the best results. Too often we blame lack of success to luck, while in fact it may be due to poor materials or poor workmanship. The essential ingredients in bread are good flour, good yeast and moisture. These, with proper temperature during rising and baking, give the desired results.

FLOUR-Flour is the soil in which the yeast plants grow and multiply. If bread is to be of first quality, the flour must contain starch and an elastic substance called gluten. When a few grains of wheat are chewed, a gummy material is left in the mouth. This is the gluten of the wheat. The gluten helps to hold the bubbles of gas in the dough and assists in making it light. The best bread flour feels rather sharp like powdered cement. It falls apart after being pressed between the fingers.

MOISTURE-The liquid which is used in bread making may be milk or water, and the proportion is one part of liquid to four parts of flour. Milk adds to the nutritive value of the bread. Hard wheat requires more liquid than soft wheat, because its larger proportion of gluten requires more moisture to soften it.

YEAST-Yeast is a tiny, one-celled plant, similar to an egg in form, but so small that it can be seen only by using a powerful magnifying glass. In order that the yeast plant may grow, it needs suitable food, moisture and warmth. Unlike most plants, it grows and multiplies by budding and by spores. The spores are to yeast what seeds are to the wheat plant.


People who live in larger towns usually get compressed yeast, because the yeast plants are fresh and moist and ready to grow when planted. When one lives far from the market it is more convenient to use dry yeast. Dry yeast is made of yeast plants and some ingredient, such as corn meal, which acts as a binder. Dry yeast can be kept for weeks, or even months, in a tightly covered can or jar, and it is not affected by an uneven temperature. In Idaho many housekeepers use liquid or potato yeast. This is very good if one is careful to keep the jars thoroly clean, emptying and scalding them often.

SUGAR, SALT AND SHORTENING-These are added to give the bread a better flavor and to help make a tender crumb. Sugar gives immediate food for the yeast
plant. Salt makes bread taste better, but should not be used too freely. Shortening makes bread more tender but if used too generously will delay the growth of the yeast plants.

TEMPERATURES-Bread will rise at a temperature of from 75 to 95 degrees Fahrenheit. The temperatures should be kept uniform; too much heat will kill the yeast plant and too low a temperature retards its growth. Some means should be used to keep the bread at an even temperature thruout the rising process. A fireless cooker or a home-made sponge box is very good for this purpose. Directions for making a sponge box may be had by writing to the Extension Division, Boise. In winter it is usually best to mix the bread in the morning, so that the yeast will not become chilled. By heating the flour the rising process may be hastened. Some use potato water, as it makes the yeast grow faster. It also helps to keep the bread moist.

PROCESSES-A sponge is a mixture of dissolved yeast mixed with flour and liquid. Sugar and melted fat may be added to this mixture. With the long process, a sponge is set and a small amount of yeast is used. The short process requires more yeast and the bread is stiffened at once. For hard wheat the long process is usually better, while the short process is satisfactory for soft wheat.

BAKING-Bread should be baked at 380 to 400 degrees F. If an oven thermometer is not available test the temperature of the oven by putting a-piece of white paper into it. If it browns in six minutes, the oven is ready. If the loaf is brushed with water before it is placed in the oven, it does not crust so soon and a better flavor results. In baking, the loaf should continue to rise for the first fifteen minutes, after which it should brown for twenty minutes. The heat may then be reduced until the baking is finished. It generally requires sixty minutes to bake a loaf weighing a pound and a half. It is very important that bread be thoroly baked, since in baking the starch becomes soluble, the gluten is hardened, the yeast is killed, alcohol and carbon dioxide are driven off and flavors are developed. Careful baking improves the appearance of the bread.

It is better to place the pans in the oven not touching each other, so that the heat will circulate around them. Unless the oven bakes very evenly, it will be necessary to turn
the pans around occasionally, or to change their position, in order to have loaves of good shape.

TO TEST BREAD-To determine when bread is baked: (1) The loaf shrinks from the sides of the pan; (2) Remove from pan and press the sides, and if they rebound, it is done.

TO CARE FOR BREAD-When bread is removed from the oven, it should be placed on wire racks to cool so that the air may pass all around it. When cold, store in receptacles which have been thoroly washed and scalded. The bread should not be wrapped. To freshen stale bread moisten the loaf, place in a hot oven and the moisture will be driven in, making a moist crumb and a crisp crust.

## YEAST BREAD (FOR TWO LOAVES)

2 c. liquid, milk or water
$1 / 2$ to 1 yeast cake, or $1 / 2$ to 1 c . liquid yeast
2 tb. shortening
2 t. salt
2 t . sugar
6 c . flour, more or less
See directions.
If milk is used it should be scalded and cooled to lukewarm before using. When liquid yeast is used its volume must be deducted from the other liquid called for.

MIXING-Soften the yeast with a small amount of Iukewarm liquid. To the rest of the liquid add the salt, sugar and shortening. Add yeast and mix all together. Measure the sifted flour into a bowl and blend with the liquid. If too soft to knead, add more flour until of the proper consistency. Knead 5 to 10 minutes or until smooth, elastic and no longer sticky. Cover closely and place where it will be away from drafts and at a uniform temperature of 80 to 88 degrees F. Let rise until about double its original bulk or until a slight touch of the finger leaves a depression. This should happen within 1 to 2 hours if the yeast is in good condition and the temperature right.

KNEADING-Cut down the dough from the sides of the bowl and knead. Should the dough be too soft, add flour, a little at a time, kneading until it is smooth, elastic and free from large gas bubbles. Cover and set aside in the same warm place for an hour or an hour and a half or until very light and at least double in bulk.

MOLDING-Cut down the dough from the sides of the bowl and knead again to expel the large bubbles of gas. Divide into approximately equal portions; mold quickly, stretching the outside of the loaf and pinching together underneath; place, crease side down, in a slightly greased pan which has been warmed but is not hot. Cover and set the loaf in the same warm place and allow to rise 50 minutes to 1 hour or until the loaf has doubled in bulk. The final size of the loaf depends largely upon the kind of flour used, hard wheat making a larger loaf than soft wheat.

## LIQUID YEAST

4 medium sized potatoes (pared)
1 qt . boiling water
$1 / 4$ c. sugar
1 t. salt
1 cake dry yeast soaked in $1 / 4$ c. lukewarm water
Grate or grind the potatoes directly into the water, boil until soft, about five minutes, stirring constantly. Add the salt and sweetening and allow the mixture to cool. When lukewarm add the yeast. Keep at ordinary room temperature for twenty-four hours, when it will be light and ready for use. Store in a covered stone jar in a cool, dark place. It will keep a week or two if kept cold.

## PARKER HOUSE ROLLS

2 c. scalded milk
3 c . flour
3 tb. butter
2 tb. sugar
2 t. salt

1 yeast cake dissolved in $1 / 4$ c. luke warm water, or 1 c. liquid yeast.

Flour to stiffen sufficiently to knead.

Add butter, sugar and salt to milk; when luke warm add dissolved yeast cake or liquid yeast and three cups of flour. Beat thoroly, cover and let rise until light; cut down and add enough flour to knead (it will take about two and one-half cups). Let rise again, toss on slightly floured board, knead, pat and roll out to one-third inch thickness. Shape with a biscuit cutter, first dipped in flour. Dip the handle of a knife in flour and with it make a crease thru the middle of each piece, brush over one-half of each piece with melted butter, fold and press the edges together. Place in a greased pan one inch apart, cover, let rise and bake in a hot oven twelve or fifteen minutes. As rolls rise they
will part slightly and if hastened in rising are likely to lose their shape.

By varying the recipe given for bread many other fancy breads may be made.

## CINNAMON ROLLS

Use the recipe given for bread or Parker House Rolls. Roll the dough to one-third of an inch in thickness. Spread with a mixture of butter, sugar and cinnamon. Roll as jelly roll, cut into one-half inch slices. Place in a well-oiled pan, let rise to twice the original size, bake in a quick oven 15 to 20 minutes.

GRAHAM BREAD

Use the recipe given for yeast bread, substituting graham flour for one-half the white flour called for. Whole wheat flour may be used in the same way. When the long process is used, these flours should be used to stiffen the bread-not in making the sponge. These are especially good with nuts and raisins added.

## OATMEAL BREAD (ONE LOAF)

( $11 / 4$ c. milk or water or a mixture of the two and $1 / 4$ cake compressed yeast
1 tb. fat
1 tb. sugar
1 c. rolled oats.

1 c. liquid and or $1 / 4 \mathrm{c}$. liquid yeast
$21 / 2$ c. sifted flour (approximately)
$11 / 2 \mathrm{t}$. salt

Soften the yeast in one-fourth cup of lukewarm water or use liquid yeast. Scald the remainder of the liquid and pour it over the rolled oats. Cool slowly. Add the yeast and one cup of flour. Cover and allow this sponge to become very light. Add flour to make a stiff dough, cover and let rise until double in bulk. Shape into a loaf, let rise until again double in bulk and bake.

Note: Oat flour or ground rolled oats may be used in above.
SCORE CARD FOR YEAST AND QUICK BREADS
Shape and size ..... 10
Crust ..... 10
Crumb ..... 25
Grain and texture ..... 20
Flavor ..... 35

## EXPLANATION OF SCORE CARD FOR YEAST BREAD

The shape of the loaf should be symmetrical. Cracks in the loaf may be due to the following conditions: The dough may have been too stiff. (2) The bread may not have been sufficiently light when placed in the oven. (3) The oven may have been too hot, causing the bread to crust over before it had finished rising. If possible, the standard bread pan, $23 / 4$, by $41 / 2$ by 9 inches, should be used.

The crust should be about one-eighth inch deep, crisp and fairly tender. The color of the crust should be golden brown-an even color all over.

The bread should crumb when pressed between the fingers. If the crumb is sticky and soggy the bread is underdone. The color of the crumb should be a creamy white. Heavy streaks in the bread are due to poor manipulation or too high a temperature before the bread is placed in the oven.

The grain should be fine and even. Coarse grain with large holes indicates that the dough was over-light or that it was not thoroly kneaded. Underdone bread is likely to produce fermentation in the stomach, caused by the growth of the yeast plant. The texture should be soft and velvety, not hard or horny; cutting clean, not crumbling.

Bread should be sweet and nutty in flavor, not sour or bitter.

## BISCUIT DEMONSTRATION <br> FOR FIRST YEAR BREAD CLUBS

The following outline should serve merely as a guide in training demonstration teams. Each team should strive to put as much individuality into the demonstration as possible. The best demonstrations are those where the work and discussion are divided between the two girls on the team.

## FIRST YEAR BREAD CLUBS <br> BISCUIT DEMONSTRATION <br> EQUIPMENT

Rolling pin Bread board Biscuit cutter Sifter
Mixing bowl
Measuring cup (half pint) Tablespoon Teaspoon

Two case knives Shallow pan or pans Dish pan Draining pan Dish eloth Two dish towels Soap

## MATERIALS

Flour-3 c. in small pan or bowl B. P. in can

Fat (lard, Crisco or some other fat), $1 / 4$ c.
Salt in cup
Milk in a bottle or cup
Sugar, $1 / 4 \mathrm{c}$.
Butter, 2 tb, in small dish
Raisins, 2 tb. (whole seedless raisins or seeded raisins cut in half) Cinnamon in a can
Canned peaches (halves cut in 3 or 4 pieces lengthwise)
Cream, whipped, one tablespoon
Hot water
PERSONAL EQUIPMENT
Apron Cap Towel Holder
Be sure to have clean hands and finger nails. Have hair neatly arranged so that it will not be necessary to touch it.

## DEMONSTRATOR I

DEMONSTRATOR II
Introduction

1. Greeting and introduction of team.
2. Value of good bread in diet.
3. Statement of vhat is to be done.
a. Make B. P. biscuit.
b. Show various uses for biscuit dough in preparation of other dishes.

Making of Biscuits

1. State recipe used.
2. Proper method of measuring.

Reason for accurate measuring.
Follow girl measuring and state how to measure.
a. Cups full.
b. Spoonsful.

1. Half spoonful.
2. Why dry ingredients are measured and sifted together.
3. Fat.
a. Kinds that may be used.
b. Why cut in with knives.
4. Liquid.
a. Water.
b. Milk.
c. Cream. State that fat may be omitted.

Begin to measure dry ingredients into sifter.
2. c. flour.

4 t. B. P.
1 t , salt.
Sift dry ingredients into bowl.
Measure fat.
Cut in fat with two case knives.
Measure milk.

Demonstrators change places at this point.

Add milk to mixture, being careful to add the last very slowly so as not to have the dough too sticky.
6. Discussion of B. P's.
a. Kinds being used today and other brands.

Turn out biscuit on a lightly floured board-place bowl where Dem. II can reach it to show how bowl should be cleaned out.

Make short cake.

Show before placing in oven.

Place biscuit in oven.
Begin to clean up.
b. Composition of B. P.

1. All contain soda (alkaline substance.)
2. Most all contain starch (flller).
3. Acid substance. Cream of tartar. Some form of phosphate. Some form of alum.
4. Relation of price to kind of acid substance.
(Always look on cover to know what acid substance is used.)
5. Manipulation.
a. Call attention to fact that the liquid must be added carefully at the last and that bowl must be scraped clean.
b. Flour board lightly. Why?
c. Handle lightly and easily. Why? Roll with light upward strokes or pat out.
d. Thickness of biscuit-depends on size to be cut-crust desired.
e. Flour cutter so as not to stick to dough.
f. Prepare pan for Dem. I.
g. To make tops brown-
6. Have fat in pan and turn biscuit over.
7. Brush with milk or cream, not with butter.
(Put paper in oven to brown.)
8. Other uses for biscuit dough.
a. Short cake-how to modify recipe.
1 tb. sugar to $1 / 2$ tb. fat. To make individual short cakesRoll thinner than for biscuits, cut with large biscuit cutter, put one piece in pan, spread it with butter and place plece the same size on top.
9. State why we permit biscuits and products made from dough to stand for some time before putting in oven.
10. Show test for right temperature of oven. White paper in oven 4-5 minutes should be delicate golden brown.

## Demonstrators may change places again at this time if desired. Continue to clean up as quickly as (Wipe dishes while she talks.) <br> possible. <br> Subjects to Be Discussed While Cleaning

## Watch Biscuits.

Remove from oven when done.

Put fruit on short cake on plate for exhibltion.

1. Kinds of biscuit other than B. P.
a. Soda and sour milk.

Amount of soda to use with sour milk.
Action of sour milk on soda.
Why necessary to use some B. P. to make light.

Why some soda biscuits are yellow sind have a bitter flavor.
b. Other flours.

Cornmeal hiscuit.
Graham or whole wheat.
Barley.
2. Flour.

Wheat (explain each kind)
Graham.
Whole wheat.
White flour.
Hard wheat flour.
Soft wheat flour.
Uses of each-how to distinguish.
Barley (why not desirable for bread).
Oats (haven't the milling qualities and lack gluten).
Corn.
Potato.
3. Ask if there are any questions.
4. If necessary to fill in time, give a short history of bread, kinds of bread used in different countries, or tell some original story.
5. Score biscuit, bringing out the following:
Good shape-proportion of diameter to thickness.
Even brown-top and bottom.
Good grain, texture, small, evenly distributad holes.
Flavor, depends somewhat on the flour; also amount of salt and kind of fat used influence this factor.
6. Summarize points in making biscuit.
7. Show short cake. Tell of use of canned fruit as well as fresh for short cake.

Leave all utenslls clean and in'good shape.
8. Show biscuit and other products.
9. Finish with a statement something like this: If no further questions, this will conclude our demonstration, and we thank you for your attention and want you to come closer to view the products made.

## YEAST BREAD DEMONSTRATION FOR SECOND YEAR BREAD CLUB

This outline for bread demonstration teams is arranged for a team of two members. The work and discussion are divided between them so that they may demonstrate their ability to do both.

No. 1 gives the introduction and explains the process of mixing and kneading while No. 2 does the work. This dough is set aside to rise and another bowl of dough having set sufficient time to rise is brought out and Demonstrator No. 1 kneads this and shapes it into a loaf while No. 2 explains the process. No. 2 continues the discussion, explaining the baking and scores a loaf of bread.

This outline is merely suggested. The work and discussion may be divided in any manner to suit team giving the demonstration. Most of the information necessary to give a demonstration will be found in this bulletin. Additional information may be found in standard cook books and U. S. Department of Agriculture bulletins. Farmers Bulletin No. 1136 is especially good.

## SECOND YEAR BREAD CLUBS DEMONSTRATION yeast bread

EQUIPMENT

```
1 mixing bowl
1 \text { double boiler}
2 measuring cups
1 mixing spoon
1 \text { teaspoon}
1 tablespoon
2 dish towels
```

1 case knife or spatula
1 bread board
1 single loaf oaking pan
Dish pan
Draining pan
Dish cloth
Soap
MATERTAL

Flour, 4 c.
Yeast, 1 cake compressed yeast
Salt in cup
Sugar, $1 / 4 \mathrm{c}$.
Milk, 1 c.
1 bowl of dough ready to be shaped into a loaf
1 loaf of bread ready to be baked
1 loaf of bread baked

## PERSONAL EQUIPMENT

Same as in First Year Demonstration, page 14.
Outline of Demonstration for Yeast Bread

GIRL No. I
Introduction

1. Greeting.
2. General outline of work.
3. Value of knowing how to make good bread.
a. Importance of bread in diet.
b. Prestige of good bread maker.
4. Preparation for making bread.
a. Familiarity with recipe.
b. Utensils and materials at hand.
c. Cleanliness.

Assists No. 2 whenever possible.

Discussion of Process of Mixing

1. Common methods used.
a. Long process.
b. Short process.
2. Essential Ingredients and quantity used.
a. Liquid- 1 c .
b. Fat- 1 tb.
c. Sugar-2 t .
d. Salt-1 t.
e. Yeast-1/4-1/2 cake.
f. Flour-3 c. or more.
3. Discuss advantage of-
a. Kind of yeast being used.
b. Importance of correct temperature.
c. Thoro mixing.
d. Method of kneading.
e. Show test when sufficient flour has been used.
f. Show test for sufficient kneading.

Bring out dough that has risen and is ready for shaping into a loaf.
Shape into loaf, put in baking pan, pressing down into corners of pan-see that pan is well olled.
Set in warm place-cover and let rise to double its bulk.

GIRL No. II
Wash hands and make final arrangements of materials and equipment.

Begin work, following discussion given by Demonstrator No. 1. Mixing Ingredients

1. Put $1 / 4$ of the liquid (warm) on the yeast cake, let stand in warm place until needed.
2. Measure sugar, salt and fat, put in a bowl which has been scalded. Pour nver these the scalded milk or water.
3. Stir until solid ingredients are dissolved.
4. Test for correct temperature.
5. Add yeast, stirring well.
6. Add flour gradually until stiff enough to knead, that is when the dough does not stick to bowl.
7. Turn dough on board.

Knead until large bubbles appear an surface.
Show tests for sufficient flour being used.
8. Put dough in bowl, oil the top of dough. Set bowl in pan of warm water. Cover closely. Set in a warm place to rise.

Wash hands, light oven, arrange equipment and oil pan.
Explain method of determining when dough has risen sufficient-
Indy.of al
Explain process of kneading and shaping into loaf.

Clean up table and utensils.

Do testing of oven while No. 2 discusses it.

## Baking

a. Bring out a loaf ready for bak-ing-discuss /reasons why you know it is ready.
b. Test oven.

1. Brown white paper in five minutes.
2. Can just bear hand in oven.
3. 380 to 425 degrees F .
4. Reduce temperature towards last.
c. Position of bread in oven.
5. Center of oven.
6. Upper grate for browning.
d. Time required for baking and the changes at different periods.
Bring baked loaf from oven as tho it were just ready to remove from pans.
Give it to No. 2.

Cut loaf at proper time for discussing crumb, textures, etc.
e. Test when done.

1. Leaves pan.
2. Color.
3. Sound.
f. Care after removing from oven and storage.
g. Characteristics of good loaf of bread (see score card).

## Conclusion

1. Summary of processes.
2. Where additional information is available.
3. Pledge or yell by team.
4. May serve bread.

## SCORE CARD FOR DEMONSTRATION TEAMS

Div. I. Skill 25 Points
a. Ease of procedure.

1. Skill refers to ease of procedure or whether the members of the team are composed and at ease in doing the work.
b. Workmanship or efficiency of manipulation.
c. Neatness.
2. Neatness or cleanliness in doing work.
d. Speed, system or dispatch.

## Div. II. Subject Matter 25 Points

a. Accuracy.

1. The correctness of statements made in oral presentation and proper methods in doing the work.
b. Completeness.
2. Completeness refers to the giving of all steps necessary to a clear understanding of the process.
c. Clearness.
3. Clearness means the definiteness of statements made in simple language easily understood by old and young.
d. Replies to questions.
4. Teams shall respond to any questions asked by judge or spectators.

## Div. III. Team Work 25 Points

Judgment will be on the work of the teams as a whole.
a. Preparation, arrangement and use of equipment.

1. The team will be responsible for the arrangement and preparation of equipment and for its use.
b. Preparation and handling of material and results.
2. The team will be judged on their method of preparing and handling the material.
c. Organization of work.
3. Each member insofar as practical to be kept busy with a definite part so that the work and instruction given proceed without delay, but each member of the team must be able to demonstrate the whole process.
d. Appearance and conduct of team.
4. Appearance and conduct include the personal appearance of members and of the team as a whole They should be business-like, happy and insofar as possible a unit in action and appearance.
Div. IV. Product or Result 25 Points

The Standard Score Card-average of three members. Total 100 points.

## SUGGESTED PROGRAM FOR FIRST YEAR CLUBS <br> First Meeting-Organization Meeting

Plan of Meeting:

1. Take enrollment.
2. Elect officers and appoint committees, including one to make out a year's program of work.
3. Instructions as to keeping of record books and explanation of directions in making of quick breads.
4. Learn club pledge.
5. Plans for Short Course.

## Second Meeting

1. Food selection-first lesson.
2. Demonstration of muffins.
3. Judging muffins.
4. Practice of club songs.

Third Meeting

1. Food selection-second lesson.
2. Demonstration of leavening agents.
3. Demonstration of making biscuits.
4. Judge products.
5. Business meeting.
6. It will be found a good plan to divide entire club into teams and later have a try-out in the club to determine what team will represent the club in the county contest.

Fourth Meeting

1. Plan balanced meal when muffins could be used.
2. Leader demonstrates setting of table.
3. Group I demonstrates making of biscuits.
4. Club songs.

## Fifth Meeting

1. Leader demonstrates making yeast, setting sponge, and baking of bread from sponge previously set.
2. Instructions on baking temperature for bread made from previous setting by leader.

## Sixth Meeting

1. Judge bread girls made at home.
2. Trial demonstration of making biscuits by group II.
3. Club songs.

## Seventh Meeting

1. Pre-school meal-lesson IV.
2. Group I demonstrates preparation of food for pre-school age child.
3. Practice club pledge and songs.

Eighth Meeting

1. School age diet, lesson V.
2. Groups II and III demonstrate meal for school age child.
3. Games.

Ninth Meeting

1. Practice demonstration for Club team in contest.
2. Business meeting.
3. Games.

Tenth Meeting

1. Public demonstration. One team making biscuits, one team judging biscuits, one team demonstrating school age meal.
2. Play, "Queen of Foods."

Eleventh Meeting

1. Club pienic.

## Twelfth Meeting

1. Business meeting.
2. Judging record books, reports, etc.

## SUGGESTED PROGRAM FOR SECOND YEAR CLUBS

## First Meeting

1. Organization meeting, same as outlined for first year club.
2. Club pledge.

## Second Meeting

1. Demonstrate various uses of bread dough. This can be made a most interesting meeting by having the sponge ready and let three or more girls demonstrate. They could make from the same sponge hot cross buns, cinnamon rolls, Parker House rolls, bread sticks.
2. Business meeting.
3. Adopt club program for the year.
4. Explain demonstration team work for second year clubs. Divide the club into groups of three, assign the demonstrations for the rest of club year.

## Third Meeting

-1. Lesson I-Causes of Malnutrition.
2. Score quick bread. It will be necessary to begin scoring bread at this meeting in order to get four bakings scored during club year.
3. Demonstrate making graham bread.
4. Business meeting.
5. Teach new club songs and begin work on original song.

Fourth Meeting

1. Lesson II-How to Prevent Malnutrition.
2. Score bread.
3. Demonstration of balanced lunch for pienic.
4. Business meeting and social hour.

## Fifth Meeting

1. Lesson III-Meal Planning.
2. Correct table setting.
3. Score bread.
4. Business meeting and social hour.

Sixth Meeting

1. Demonstrate making ginger bread.
2. Business meeting.
3. Social meeting.
4. Serve lunch.
5. Games.

Seventh Meeting

1. Business meeting.
2. Games.
3. Club pienic.

Eighth Meetina

1. Demonstration-exhibit of protective foods.
2. Business meeting and social hour.
3. Songs.

Ninth Meeting

1. Trip through bakery, flour mill or some place of educational interest.
2. Business meeting.
3. Social hour.

## Tenth Meetina

1. Entertain mothers at this meeting.
2. Team No. I demonstrates the making of nut bread.
3. Team No. II demonstrates the making of bran bread.
4. Team No. III serves refreshments of girl's products.
5. Business meeting.
6. Have several mothers or state workers give talks to the girls. Eleventh Meeting
7. Public demonstration of making yeast bread.
8. Score bread in public demonstration.
9. Give club pledge.
10. Play "Milky Way to Loveliness."

Twelfth Meeting

1. See that record books are completed and each girl understands how to make up the final report.
2. Plans for Short Course.

# LESSONS IN FOOD FACTS 

 FIRST YEAR-FOOD FACTSLESSON I<br>FOOD SELECTION

There is a close connection between health and proper selection of food.

It is by means of food that the various parts of the body are built and repaired.

Food gives the power to perform the daily work.
It helps keep the body warm.
It helps to keep the body fit and free from disease.
Food poorly chosen can open the way to low resistance to disease. The undernourished child or adult is a prey to all sorts of unwholesome influences. Lack of the right food does not presuppose poverty. The fault may be in poor selection of food or possibly too large an amount of the wrong kind of food.

The best line of pursuit is to know more about the principles that underlie the selection of foods, to know more about what food does to the body, how it does it and to understand the relation of food to health.

Good health means joy in living, courage and ability for the work to be done.

A body in good condition has:

1. Strong bones.
2. Firm muscles.
3. Good teeth.
4. Healthy skin.

They accompany steady nerves, sound sleep, normal appetite and can be charged to the wise selection of three meals a day.

The food needs of the body are:

1. Fuel or energy foods to keep the body warm and supply power for internal and muscular work.
2. Building foods-foods for new growth and to repair bones, muscles, teeth, nerves and blood. If we fail to supply these, the body becomes damaged or worn out.
3. Protective foods. Without these foods, the body would cease to grow. It could not do its work.

## LESSON II

## FOOD SELECTION

There are three things that everyone should know about the food that goes to make their daily supply.

1. We should know what substances give fuel value and what foods should be selected to supply this.
2. We should know what substances build tissue and what foods are building foods.
3. We should know what foods give body regulating substances in the forms most usable.

## FUEL FOODS

(Refer to meal planing guide here)
Starch is the cheapest and most abundant of fuels.
The day's meals are more palatable if some of the fuel is supplied by foods rich in sugar.

Foods rich in fat have a high energy value. Too little fat in the form of dairy products may cause a stunting of growth.

Foods that supply building material are necessary. There are four important building materials.

## BUILDING FOODS

Protein
There is animal protein and plant protein. Some of the day's protein should be chosen from both. Milk is the best food containing animal protein for children.

> Lime

Lime is a bone making material and is especially needed by growing children. Milk is the cheapest lime food. A lack of milk in children's diet may result in a serious lack of lime.

## Iron

Iron makes red blood. Green vegetables are the most valuable source of iron.

## Phosphorus

Phosphorus is a bone making material. Phosphorus is necessary for bone, teeth and flesh.

## PROTECTIVE FOODS

Vitamines or protective foods, such as fresh fruits and vegetables, dairy products, cereals and eggs are necessary in child diet.

## GUIDE FOR MEAL PLANNING

 FOOD FACTS| GROWTH PROMOTING AND PROTECTIVE FOODS |  |  | BODY BULLDING AND REGULATING FOODS MUSCLE, BONE, TEETH AND REGULATING |  |  |  |  | ENERGY GIVING FOODS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| "A" | "B" | "C" | 1rotein | Sime or Calcinm | Iron | Phosphorus | Roughage | Starches | Sugar | Fats |
| Cream <br> Butter <br> Egg yolks <br> Spinach <br> Lettuce <br> Sweet <br> Potatoes <br> Carrote <br> Rutabagas | Whole Cereals Milk Spinach Beets Tomatoes Carrots Turnips Cabbage | Oranges <br> Lemons <br> Tomatoes (Fresh or canned) <br> Raw cabbage <br> Raw carrots <br> Raw onfons <br> Raw tuenips <br> Raspberries | Whole or skim mulk <br> Eggs <br> Cheese <br> Lean meat <br> Fish <br> Dried peas <br> Cereals <br> Nuts | Milk <br> Cheese <br> Carrots <br> Cauliflower <br> Figs <br> Oranges <br> Rutabagas <br> Buttermilk <br> Cottage <br> cheese | Spinach <br> Dried beans <br> Peas <br> Dates <br> Prunes <br> Figs <br> Raisins <br> Egg yolk <br> Red meat <br> Molasses <br> Bran | Milk <br> Cheese <br> Codfish <br> Lean beef <br> Oatmeal <br> Celery <br> Egg yolk <br> Spinach <br> Cauliflower <br> Asparagus <br> Whole cereals | Green vegetables <br> Beans <br> Cabbage <br> Celery <br> Asparagus <br> Onions <br> Prunes <br> Dates <br> Bran <br> Apples <br> Turnips | Bread <br> MacaronI <br> Rice <br> Tapioca <br> Cornstarcin <br> Potatoes <br> Breakfast foods <br> Crackers | Syrup <br> Honey <br> Sugar <br> Preserves <br> Jellies <br> Dried frults <br> Candy <br> Cake <br> Cookles | Butter <br> Cream <br> Cheese <br> Lard <br> Bacon <br> Salad olls <br> Chocolate <br> Salt pork <br> Peanut butter |

Good health in later years and the capability of the child can be developed or retarded by the care it receives during childhood.

It pays well to give the best care in child feeding, to give them simple foods that are best for them and to have these foods prepared carefully so that digestion will be promoted. Regular feeding of the child is essential.

The diet for these years should include milk, eggs (especially the yolk), well-cooked cereals, fruit and vegetables. Some form of dry bread can be included for aiding tooth and jaw development. Fruits are necessary in child diet for the anti-scurvy vitamine, for their laxative effect and as appetizers. If digestion is feeble, only the fruit juices should be used. One quart of milk per day per child is the best amount for favorable development of bones and teeth. Butter should be used on bread. Vegetables form an important factor in child diet. They contain necessary minerals and vitamines. They may be cooked, or such vegetables, as cabbage, carrots and celery may be served raw.

Dr. Moore, of the University of Oregon Medical School, says, "Too much milk may be the cause of poor appetite and should be reduced if a child does not eat vegetables willingly." Neither tea nor coffee should be used.

A problem in every home is the inclination to enlarge the kinds of food too soon and give a child food not suited to its years. The meal planning guide shows that, especially in meals for children, the foods are chosen largely from "protective foods."

## LESSON V

## FOODS FOR SCHOOL CHILDREN

Good health has an economic as well as a personal value. Regularity and simplicity of meals and pleasant surroundings at meal times are important requirements.

The growing boy or girl needs the right kind of food at proper times or he runs a risk of malnutrition. Irregularity of meals is a common error. The simple diet of seven years can be extended. The number of foods is still limited but the inclination to choose one food for a meal and refuse all others should be discouraged.

The boy or girl of school age needs three good meals a day. When a lunch is carried to school or when there is not very much time at noon the heavy meal should come at night.

The important factors are to see that the child has enough outdoor exercise to develop an appetite, to know the foods a child should have and to devise some practical method of getting the child to eat them. These food habits should not be overlooked in child feeding:

1. Regularity of meals.
2. Plenty of water should be given between meals.
3. Plenty of time should be allowed for meals.
4. Encourage eating slowly.
5. Cleanliness is necessary.

## HEIGHT AND WEIGHT TABLE BOYS

| Height | Av. wt. | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 18 | 14 | 15 | 16 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Inches | for Ht. | Yrs. | Yrs. | Yrs. | Yrs. | Yrs. | Yrs. | Yrs. | Yrs. | Yrs. | Yrs. | Yrs. | Yrs. |
| 39 | 35 | 35 | 35 |  |  |  |  |  |  |  |  |  |  |
| 40 | 36 | 36 | 36 |  |  |  |  |  |  |  |  |  |  |
| 41 | 38 | 38 | 38 | 38 |  |  |  |  |  |  |  |  |  |
| 42 | 39 | 39 | 39 | 39 | 39 |  |  |  |  |  |  |  |  |
| 43 | 41 | 41 | 41 | 41 | 41 |  |  |  |  |  |  |  |  |
| 44 | 44 | 44 | 44 | 44 | 44 |  |  |  |  |  |  |  |  |
| 45 | 46 | 46 | 46 | 46 | 46 | 46 |  |  |  |  |  |  |  |
| 46 | 48 | 47 | 48 | 48 | 48 | 48 |  |  |  |  |  |  |  |
| 47 | 50 | 49 | 50 | 50 | 50 | 50 | 50 |  |  |  |  |  |  |
| 48 | 53 |  | 52 | 53 | 53 | 53 | 53 |  |  |  |  |  |  |
| 49 | 55 |  | 55 | 55 | 55 | 55 | 55 | 55 |  |  |  |  |  |
| 50 | 58 |  | 57 | 58 | 58 | 58 | 58 | 58 | 58 |  |  |  |  |
| 51 | 61 |  |  | 61 | 61 | 61 | 61 | 61 | 61 |  |  |  |  |
| 52 | 64 |  |  | 63 | 64 | 64 | 64 | 64 | 64 | 64 |  |  |  |
| 53 | 68 |  |  | 66 | 67 | 67 | 67 | 67 | 68 | 68 |  |  |  |
| 54 | 71 |  |  |  | 70 | 70 | 70 | 70 | 71 | 71 | 72 |  |  |
| 55 | 74 |  |  |  | 72 | 72 | 73 | 73 | 74 | 74 | 74 |  |  |
| 56 | 78 |  |  |  | 75 | 76 | 77 | 77 | 77 | 78 | 78 | 80 |  |
| 57 | 82 |  |  |  |  | 79 | 80 | 81 | 81 | 82 | 83 | 83 |  |
| 58 | 85 |  |  |  |  | 83 | 84 | 84 | 85 | 85 | 86 | 87 |  |
| 59 | 89 |  |  |  |  |  | 87 | 88 | 89 | 89 | 90 | 90 | 90 |
| 60 | 94 |  |  |  |  |  | 91 | 92 | 92 | 93 | 94 | 95 | 96 |
| 61 | 99 |  |  |  |  |  |  | 95 | 96 | 97 | 99 | 100 | 103 |
| 69 | 104 |  |  |  |  |  |  | 100 | 101 | 102 | 103 | 104 | 107 |
| 63 | 111 |  |  |  |  |  |  | 105 | 106 | 107 | 108 | 110 | 113 |

[^1]
# HEIGHT AND WEIGHT TABLE GIRLS 

| Height <br> Inches | Av. wt. for Ht. lbs. | ${ }^{5}$ | $\begin{gathered} 6 \\ \text { Yrs. } \end{gathered}$ | Yrs. | $\begin{gathered} 8 \\ \text { Yrs. } \end{gathered}$ | $\begin{gathered} 9 \\ \text { Yrs. } \end{gathered}$ | $\begin{aligned} & 10 \\ & \text { Yrs. } \end{aligned}$ | $\begin{aligned} & 11 \\ & \text { Yrs. } \end{aligned}$ | $\begin{aligned} & 12 \\ & \mathrm{Yrs} . \end{aligned}$ | $\begin{gathered} 13 \\ \text { Yrs. } \end{gathered}$ | $\begin{gathered} 14 \\ \text { Yrs. } \end{gathered}$ | $\begin{gathered} 15 \\ \text { Yrs. } \end{gathered}$ | $\begin{gathered} 16 \\ \text { Yrs. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 39 | 34 | 34 | 34 |  |  |  |  |  |  |  |  |  |  |
| 40 | 36 | 36 | 36 | 36 |  |  |  |  |  |  |  |  |  |
| 41 | 37 | 37 | 37 | 37 |  |  |  |  |  |  |  |  |  |
| 42 | 39 | 39 | 39 | 39 |  |  |  |  |  |  |  |  |  |
| 43 | 41 | 41 | 41 | 41 | 41 |  |  |  |  |  |  |  |  |
| 44 | 42 | 42 | 42 | 42 | 42 |  |  |  |  |  |  |  |  |
| 45 | 45 | 45 | 45 | 45 | 45 | 45 |  |  |  |  |  |  |  |
| 46 | 47 | 47 | 47 | 47 | 48 | 48 |  |  |  |  |  |  |  |
| 47 | 50 | 49 | 50 | 50 | 50 | 50 | 50 |  |  |  |  |  |  |
| 48 | 52 |  | 52 | 52 | 52 | 52 | 53 | 53 |  |  |  |  |  |
| 49 | 55 |  | 54 | 54 | 55 | 55 | 56 | 56 |  |  |  |  |  |
| 50 | 58 |  | 56 | 56 | 57 | 58 | 59 | 61 | 62 |  |  |  |  |
| 51 | 61 |  |  | 59 | 60 | 61 | 61 | 63 | 65 |  |  |  |  |
| 59 | 64 |  |  | 63 | 64 | 64 | 64 | 65 | 67 |  |  |  |  |
| 53 | 68 |  |  | 66 | 67 | 67 | 68 | 68 | 69 | 71 |  |  |  |
| 54 | 71 |  |  |  | 69 | 70 | 70 | 71 | 71 | 73 |  |  |  |
| 55 | 75 |  |  |  | 72 | 74 | 74 | 74 | 75 | 77 | 78 |  |  |
| 56 | 79 |  |  |  |  | 76 | 78 | 78 | 79 | 81 | 83 |  |  |
| 57 | 84 |  |  |  |  | 80 | 82 | 82 | 82 | 84 | 88 | 92 |  |
| 58 | 89 |  |  |  |  |  | 84 | 86 | 86 | 88 | 93 | 96 | 101 |
| 59 | 95 |  |  |  |  |  | 87 | 90 | 90 | 92 | 96 | 100 | 103 |
| 60 | 101 |  |  |  |  |  | 91 | 95 | 95 | 97 | 101 | 105 | 108 |
| 61 | 108 |  |  |  |  |  |  | 99 | 100 | 101 | 105 | 108 | 112 |
| 62 | 114 |  |  |  |  |  |  | 104 | 105 | 106 | 109 | 113 | 115 |
| 63 | 118 |  |  |  |  |  |  |  | 110 | 110 | 112 | 116 | 117 |

Table prepared by Dr. Bird T. Baldwin and Dr. Thomas D. Wood.

## HEALTH RULES AND FOODS FOR CHILDREN

## HEALTH RULES FOR CHILDREN

1. Sleep long hours with open windows.
2. Drink milk. (No tea or coffee.)
3. Eat some vegetables and fruit every day.
4. Drink plenty of water. (This helps in keeping the system free of waste.)
5. Brush teeth at least once a day.
6. Bowel movements every day.
7. Play out of doors.
8. Bathe more than once a week.

FOODS BEST FOR TOOTH DEVELOPMENT

1. Milk.
2. Fruits-apples, prunes and oranges.
3. Well cooked cereals.
4. Vegetables such as carrots, cabbage, spinach, celery and potatoes.
5. Toast or hard bread (to induce mastication.)

## SUGGESTED MENUS FOR CHILDREN

Breakfast
Baked apple or oranges
Oatmeal Milk

Toast
Mid-Morning Lunch
Graham crackers and milk
Noon Lunch

Small lamb chop
Bread
Sauce

Creamed carrots

Supper
Creamed eggs on toast
Slaw with cream and sugar dressing
Rice pudding with raisins
Milk
Breakfast
Stewed prunes
Graham muffins
Milk Soft cooked egg
Mid-Morning Lunch
Bread and milk
Dinner
Stewed chicken Spinach
Whole wheat bread
Apple tapioca
Supper

| Bacon |  |
| :---: | :--- |
| Apple sauce | Baked potato <br> Butter |
| Milk |  |

## SECOND YEAR-FOOD FACTS

## LESSON I

MALNUTRITION
Malnutrition is a lowered physical condition brought about by faulty or insufficient diet or thru bad health habits. The body must be in the best of condition in order to receive the benefits from the foods eaten.

Malnutrition leads to physical and mental disability. It paves the way for every ill known in childhood. Malnutrition is not confined to poor districts in cities. It is found in homes of wealth and in country neighborhoods where food of the right kind abounds.

The causes of malnutrition are:

1. Poor selection of food.
2. Insufficient food.
3. Improper cooking.
4. Disorders in digestive tract.
5. Faulty assimilation.
6. Faulty food habits.
7. Over-fatigue.
8. Diseased organs.
9. Bad posture.
10. Faulty health habits.

Malnutrition can be recognized by a number of symptoms. An undernourished child is underweight. The physical condition can be discovered by consulting the height and weight chart, for the relation of weight to height and age is reliable.

Malnutrition is apt to be accompanied by pale or sallow skin, soft flabby flesh, underdeveloped muscles or dark circles under the eyes. An undernourished child is apt to be listless, not inclined to work or play, tires easily and is often regarded as lazy. Such a child has little power of concentration or attention, may be fretful, nervous or irritable and especially finicky about its food.

An undernourished child may have one or several of these symptoms. Children suffering from malnutrition lack resistance to disease. They are not only more suscep-
tible to disease, but also they usually suffer more from serious illnesses.

Malnutrition can be overcome or prevented if dealt with intelligently. The first step toward a remedy is to discover the cause. There should be a physical examination to find physical defects. Bad teeth should be filled or removed. Enlarged or diseased tonsils should be taken out and any organic defect removed.

A child may eat nourishing foods and still be undernourished. It evidently is necessary to know the cause before knowing how to proceed in handling the case.

Healthful child life is an asset to our country.

## LESSON II

## HOW TO PREVENT MALNUTRITION

Correct diet probably is the best protection against malnutrition. While wholesome exercise and plenty of fresh air are necessities, suitable food remains the most fundamental thing in growth and development. The greatest regard should be given such evidences of health as :

1. Sound sleep.
2. Firm flesh.
3. Good color.
4. Reasonable appetite.
5. Absence of peevishness.

Weighing and measuring should be done at frequent intervals to see if the boy or girl is normal in weight and height.

The following should not be overlooked:

1. Regular meals.
2. Thoro chewing.
3. Cleanliness of food and surroundings.
4. Plenty of water between meals.
5. Happy state of mind at meal time.

Girls of high school age should not go to school without breakfast. "Nerves" are often the result of undernourishment. It is during this period that the welfare of the woman's nervous system is largely determined.

The following health rules should be part of every boy's and girl's home training:

1. Live as much as possible out of doors.
2. Breathe deeply.
3. Bowel movement every day.
4. Stand, sit and walk erect.
5. Keep the body clean by frequent bathing.
6. Wear clean, loose clothing.
7. Take out of door exercise.
8. Brush the teeth regularly.
9. Rest during the day.
10. Sleep in fresh air.

Constant watchfulness will give to the boy or girl the vigor and health that are the foundation of future happiness and prosperity.

## LESSON III

## FOODS FOR THE FAMILY

Perhaps the most important as well as frequently the most trying problem that the housewife faces is the selection of food or planning the family meal so that it is suited to each member's needs.

Be sure to have proteins, carbohydrates and fats represented in each meal. In addition, the foods selected should furnish iron, phosphorus and calcium and provide roughage to give ballast. Take the day as a unit in planning rather than the meal. It is helpful to make a list of the food materials that need to be included in the day's meals. There should be:

1. Milk for all the children.
2. Fruit juice for the one year old child.
3. One kind of fruit for the others.
4. Cereal.
5. A mild green vegetable for the children.
6. One kind of green vegetable for all except the baby.
7. Eggs for the children.
8. Meat for the balance of the family (including children over six years of age.)

The ideal meal is the simple one (whether for the family meal or the meal where guests are included), in which the different types of food are represented, but not repeated. Foods should be well-cooked and each should contribute its share to a satisfying, well-balanced whole.

In using the meal plan guide it will be seen that certain foods supply more than one need for the body, for example, milk, cabbage, carrots, eggs, etc. Foods that are repeated in several columns are especially valuable.

Roughage or laxative foods should be given consideration in our meal planning. They help regulate the bowel movement and in this way are health promoters.

The diet for elderly persons: In old age the loss of the power of mastication adds difficulty. Food that does not require chewing should be provided, such as milk and softcooked egg instead of meats. For carbohydrates, well-cooked cereals and baked potatoes will suffice. Sugars are valuable if they can be taken without fermentation. Digestive juices flow less rapidly and therefore fats should be used sparingly. Warm food is valuable to help stimulate gastric secretion. In many ways the diet of elderly persons is similar to that of children.

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2
茂：\(\quad \therefore{ }^{2}\)
83．
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[^0]:    *The first edition of the Making of Breads bulletin was written by Ina Scrivner, former county club agent. This bulletin has been prepared for publication by Marion M. Hepworth, State Leader of Home Demonstration work,

[^1]:    Table prepared by Dr. Bird T. Baldwin and Dr. Thomas D. Wood.

