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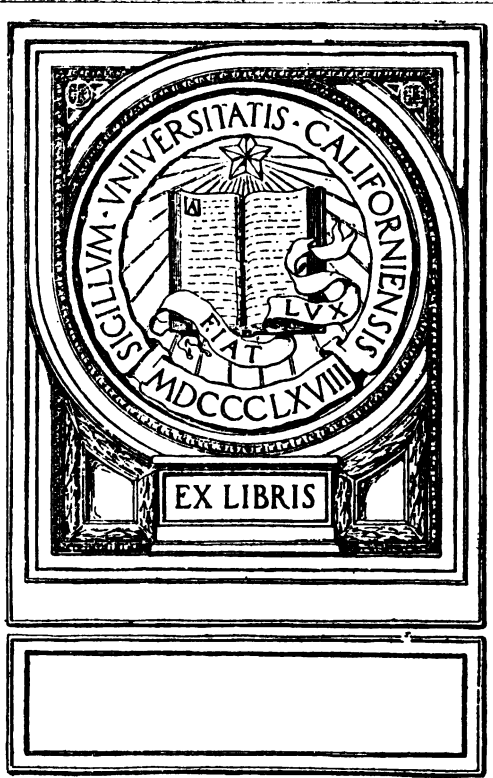
HOUSEHOLD-ARTS FOR HOME-AND-SCHOOL



VOLUME TWO
CARE OF THE HOME
SELECTION OF FOOD
COOKING AND SERVING
- LAUNDRY -
- HOSPITALITY -



CODLEY & SPORHL



**HOUSEHOLD ARTS FOR
HOME AND SCHOOL**

VOLUME II



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HOUSEHOLD ARTS FOR HOME AND SCHOOL

VOLUME II

CARE OF THE HOME COOKING AND SERVING
SELECTION OF FOOD LAUNDRING
HOSPITALITY

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PREFACE

TO GIRLS IN THE ELEMENTARY SCHOOL AND THE JUNIOR HIGH SCHOOL

This book and its companion volume were written for your use at home and at school. It is hoped that you may use them in studying any topic that you may take up in your household arts classes, or if you do not study household arts at school, that you may find them of help to you in your work at home.

This volume tells you about the care of the house ; the laundering of clothes ; the selection, cooking, and serving of food ; and about how to give pleasure to the members of your family and friends.

You will notice that the girls at the Ellen H. Richards School learned at school to do those things which were of use to them at home, and that they took up the study of the topics that would help them when they most needed the help. Their interest in their work made it possible for them to do some things which might otherwise have seemed hard, and at times inappropriate at their stage of progress. However, they found that it is easier to do some things that are considered hard when there is a reason for doing them

v

than it is to do "easy" things without having a good reason. In your school you may not take up the work in the order suggested here since your problems may be different, but you can find in the index the topic you are studying and can read the lessons in the order that will be of most help to you in your work.

Miss Ashley's classes sometimes found it necessary to spend several class periods on one lesson, depending upon the amount of work they could accomplish in their ninety-minute periods. Sometimes they repeated entire lessons or parts of them. You, too, will find it impossible to accomplish some of the lessons in one class period, for the periods may not be long enough, and no doubt you will want to repeat or review some of the work.

You may study parts of some of the lessons in other than the household arts classes just as the Ellen H. Richards girls did. That of course will increase the amount of time given to the study of home-making problems and will make it possible for you to learn more than you would otherwise have time for.

The authors of these books are indebted to Maude and Miska Petersham and to Professor LaMonte Warner for the illustrations, which will help you to understand and to enjoy the lessons.

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**HOUSEHOLD ARTS FOR
HOME AND SCHOOL**



HOUSEHOLD ARTS FOR HOME AND SCHOOL

INTRODUCTION

You have learned what good times the girls of the Ellen H. Richards School had in choosing the furniture and other pretty things for the Sunnyside apartment and how much they enjoyed making the curtains, the couch covers, dresser scarfs, table doilies, towels, and other useful things needed by Miss Ashley and Miss Roberts in their new home. One could scarcely believe that so much work would be necessary to make the things for such a small home! It is only after doing work of this kind that one really appreciates how much mothers must know about all kinds of materials to keep the home looking pretty and to keep schoolgirls tastefully dressed. The girls who attended this school used to help their mothers with the sewing

and mending one hour each week, because they had learned at school how much time is needed for this work and how hard it is to do everything alone.

This book will tell you how the girls helped Miss Ashley to keep the Sunnyside apartment clean; about the food they learned to buy, cook, and serve; about the parties and other good times they had; and about what they did at home to help their mothers.

Everybody at the Ellen H. Richards School believes that a girl should make use of what she learns at school in her home, and it used to be great fun for the girls to compare notes to see which of them practiced what they said they believed. They took great pride in doing some special work on Saturdays and Sundays, and their mothers were quite surprised at times by what they did.

Their great interest in their work was due no doubt to the fact that they helped to decide what they should do in their home-making classes.

After the girls had arranged the new kitchen Miss Ashley surprised them very much one morning by asking, "What would you like to do in this nice new laboratory and at Sunnyside this year?" They never before had had any choice in their school work and did not know just what to say, so Miss Ashley told them to talk it over among themselves and with their mothers, and hand in a report next time. The girls stood on the corner a long time trying to think out some good answers to the question and finally decided to meet at Dorothy Vincent's home after school and make some plans.

“If it is to be a home-making course I suppose we should learn to do those things that we are asked to do at home,” said Edith Potter. “Mother thinks that I might help more than I do, but she always wants me to wash the dishes and I hate dishwashing.”

“If you learned to do something else real well she might let you do that instead,” said Margaret, who had learned to make three desserts while visiting in the country. “Mother often lets me help with the cooking and it’s more fun than just cleaning up after a meal. Since I learned how to make apple tapioca, custard, and chocolate pudding we have those desserts so often that father says he wishes I would learn how to do other things as well.”

“I’d love to learn to cook, but mother won’t let me, for she says I’m in the way in the kitchen and she can do it better herself,” ventured another. “I’d like to learn to make candy,” and “I, cake,” and “I, ice cream,” came from various corners of the room.

“Yes, but we would feel rather foolish to have a big kitchen, and an apartment and a teacher all to ourselves to learn just such things,” ventured another. “Well, I have an idea. Listen to me,” said Natalie Underwood. “When I was in Pleasant Valley last year the Victory Girls had to earn money for the War Fund, and they did it by having food sales in several stores down town. Why couldn’t we have a food sale at our League Fair in November and earn money for our charity fund?”

INTRODUCTION

“You’re funny, Natalie Underwood. What has that to do with our course? We don’t know how to cook, so how could we have a cooked food sale?”

“That’s just what I’m coming to,” continued Natalie. “We could ask Miss Ashley to let us learn to cook so we could make things for the fair, and I know it would be lots of fun. And anyway it would be more

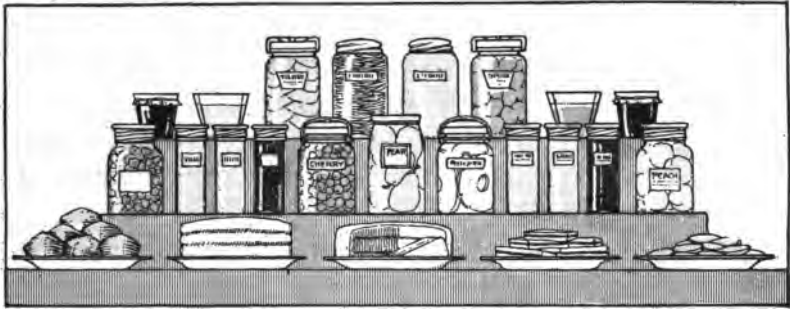


FIG. 1. — Natalie told of the jars of fruit the Pleasant Valley girls offered for sale.

sensible than just learning how to make sweet things for ourselves. Think of the money we could make!”

“And wouldn’t our mothers be surprised?”

“Do you think Miss Ashley would let us?”

“Let’s ask her and find out.”

“What kind of things did the girls have to sell?”

“How much money did they make?”

These and other questions followed in quick succession until the girls forgot all about planning for their home-making work. Working for the fair and putting Sunnyside (they never stopped to say Sunnyside

apartment) in order for Miss Ashley occupied their minds the rest of the afternoon.

Natalie told of the jars of jelly and fruit and vegetables that the Pleasant Valley girls had offered for sale; of the sandwiches and rolls, cakes, cookies, and other good things they were able to sell (Fig. 1).

“I don’t believe Pleasant Valley girls are any smarter than we are. Let’s ask Miss Ashley to let us work for the fair. We can do anything that other girls can do, and I say we can do it better if we try.”

So that is how the great interest in canning and preserving and getting ready for winter began. The girls enjoyed the work at school so much and were so anxious to have a variety of canned products to display that they even coaxed their mothers to let them do some of the work at home as they could not spend too much time at school on any one thing.

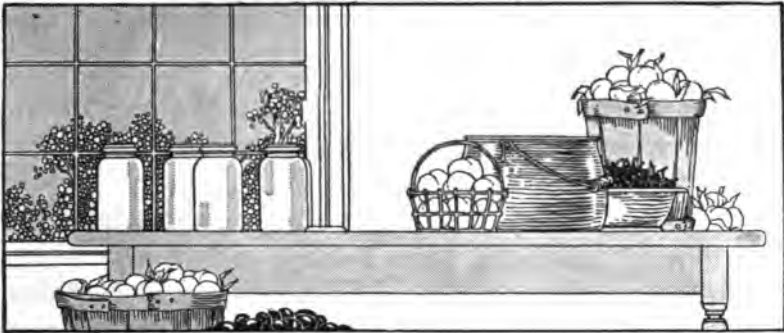
The week they learned how to make jelly Dorothy Vincent’s father said that he would pay for all the ma-



FIG. 2.— Dorothy Vincent and her father go to market together.

terials Dorothy and her mother could use on Saturday in making jelly, and that Dorothy could have one third of all the filled glasses to give to the League. Dorothy went with her father and together they bought the fruit, sugar, and glasses (Fig. 2). Dorothy kept the bills and after the day's work she and her mother and father had great fun figuring the cost of all the jelly and the price that should be charged for one glass. Dorothy was quite pleased with the day's work and could hardly wait for Monday to come. You can imagine how surprised the other girls were when they found sixteen glasses added to their stock!

Chapter I will tell you some of the things the girls learned as they worked with the fruit. During the first few weeks they found that there were many things they would enjoy learning and doing. The chapters that follow will tell you of these things.



CHAPTER I

STORING FRUITS AND VEGETABLES FOR WINTER

LESSON I

THE CANNING OF FRUITS

The girls can fruit and vegetables for their sale.

Such clean aprons, and caps, and hands as greeted Miss Ashley on the first day the girls were to use the kitchen!

All curls and straggling hairs were tucked under the pretty, close-fitting caps, and the hands and nails were as clean as Miss Ashley's. The girls were eager to begin. Even before they were seated Constance volunteered, "Mother thinks we can sell every quart of fruit we put up because, she says, everyone likes to have jars of fruit on the shelf for winter use. She cans something nearly every day in the fall because fruit is much cheaper than than it is in the winter, and also, it seems too bad

I. Reasons
for
canning
fruit.

to let it spoil. It tastes so good, too, and there are many ways in which it may be used. We have some kind of fruit every day and most days use it in every meal."

"I presume that is one reason why you are so healthy, Constance," answered Miss Ashley.

Fruit is a very valuable food because it contains some things that the body needs very much. In your hygiene class you learned that there are minerals in your body and that as your body works and plays these minerals are used and must be replaced. The fruits and vegetables that we eat help to replace them and to keep the body in good working and good playing condition. Your rosy cheeks and red lips show that you have good blood in your bodies and that good blood depends upon a good supply of iron, which fruit provides. Your strong bones need a supply of lime, and fruit and vegetables help to supply that, too; your muscles are kept firm by a fresh supply of iron, phosphorus, and potassium, and again fruits and vegetables help supply these. So you see that it is very necessary to use fruits and vegetables every day in order to give iron to the blood, lime to the bones and teeth, and iron, phosphorus, and potassium to the muscles in order to keep the body well and to help it grow.

In addition to these minerals fruits contain a great deal of water, which is of use to the body, and certain acids of pleasant flavor, which do for the body what

**II. Why
fruit
should be
eaten.**

medicine might do, except that they do it better. If you eat sufficient fruit and vegetables maybe you would never need to take castor oil! (Fig. 3.)

"My grandmother says, 'An apple a day keeps the doctor away,' and now I know what she means," said Edith Potter.

"And I'm going to eat fruit and vegetables all winter so that I won't have to take any more of that iron tonic in the spring," said Margaret.



FIG. 3. — Castor oil or fruit? Which do you take?

Some day later we shall learn more about the value of fruit. Just now it would seem best for us to get at this big basket of peaches that was delivered here this morning. There are many interesting things to do and to learn when one cans fruit for the first time, and since this is for sale we shall have to be especially careful.

The great secret of success in the canning of any food is absolute cleanliness. Fruits and many other foods spoil because certain kinds of yeasts and molds and bacteria grow on them and cause changes in them which make them unfit for us to eat. So it is necessary for us to kill all of these tiny little organisms and then to put the fruit into jars which are free from them and seal so tightly that no "germs" of any kind can get in. There are other ways of keeping fruit, but we shall learn of those later.

III. Why
fruits
spoil.

Some of the girls looked at the peaches and said that they couldn't see anything on them. So Miss Ashley explained that the organisms were so small that they could not be seen except through a microscope and that she had asked the science teacher to show them some slides the next day in their general science lesson. The girls were eager for that day to come, and sure enough, Mr. Lockman had the slides ready and this is what the girls saw. (See Fig. 4.)

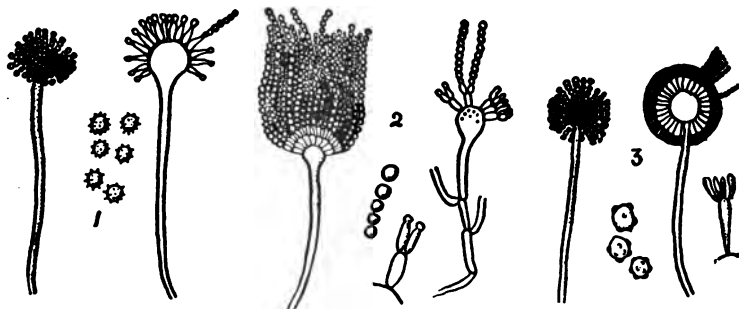


FIG. 4. — Three species of mold as seen under a powerful microscope.

Miss Ashley knew just what was necessary in order to make the canning lesson interesting and successful and had her share in it well planned. She had everything on hand so that there would be no time wasted; and she knew that the girls would ask all kinds of questions which she was prepared to answer.

Because of the limited time for the class period she had the water heating in the wash boiler, which was to

IV. Miss Ashley's preparation for the canning lesson.

be used for the sterilizer (Fig. 5), and more heating in the teakettle to be used for other purposes. Miss Ashley knew that she would have to show the class how to go ahead that morning, for the work was new, so she had everything in readiness. During the first part of the lesson she and the girls worked together learning how to can the peaches. Later the girls worked in

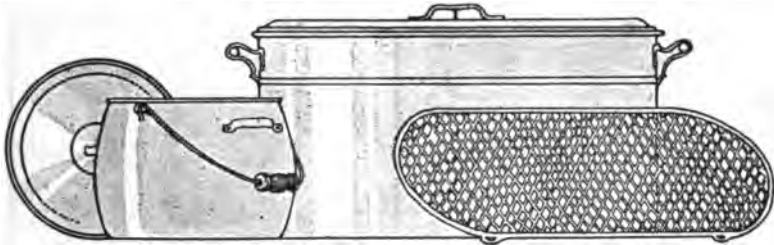


FIG. 5. — A washboiler or a large kettle may be used for a sterilizer. Notice the wire rack for the bottom of the boiler.

groups of two, and at the end of the lesson there were fifteen jars of good-looking fruit ready for the fair.

In their eagerness to do their work well the girls watched Miss Ashley very carefully and asked ever so many questions because they wanted to be sure that they knew how to go ahead and why they took each step.

v. What the girls did and what they learned.

The first thing they did was to sterilize the jars. By *sterilizing* we mean the killing of all bacteria, yeasts, and molds. This is done by boiling the jars for about twenty minutes in a kettle of water. It is best first to wash the jars clean, rinse them, and put them on in a kettle of cold

1. Preparing the jars.

water; this tempers the jars as well as sterilizes them. To keep the jars from cracking put a cloth in the bottom of the kettle and place the jars on their sides. The girls did this first so that the jars would be ready for the fruit.

Most people like fruit sweetened, although it is

2. Making the sirup. not necessary to add sugar to it in

order to keep it. Sirups may be made by using different amounts of sugar and water. The girls used one level cup of sugar to two of water and boiled it until the sugar was well dissolved. When sugar is expensive or difficult to obtain it is well to use less or even none.

They made the sirup before they got the fruit

ready so that it would not have to stand and discolor.

The old way of paring peaches was to use a knife, but Miss Ashley showed the class how to remove the skins in an easier way. She put the fruit

3. Preparing the peaches.

into a strainer and lowered it into a kettle of boiling water for about a minute, then lifted it and lowered it into a kettle of cold water (Fig. 6).

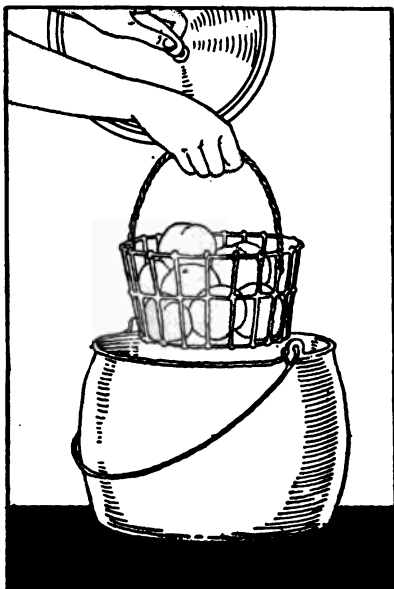


FIG. 6. — Lowering peaches into a kettle of boiling water.

The skins slipped off easily after that and the peaches kept their good color. Peaches and many other fruits turn dark when pared with a steel knife, so this method of removing the skins is a good one if the natural color is to be kept.

The peaches were then halved, the stones removed, and the halves packed into jars. "Which of these jars

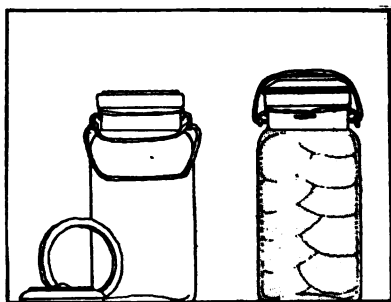


FIG. 7. — The girls filled their jars like the one above.

of fruit do you think you would buy or would enjoy having on your pantry shelves?" asked Miss Ashley, uncovering several jars that were standing on a near-by table. The girls were unanimous in their decision. They all preferred the jars that

were well filled with halves of peaches, uniform in color, size, and shape, and symmetrically arranged in the jars. When the girls filled their jars each was careful to turn the cut side of the peaches down so that the full jars looked like Fig. 7. They used small wooden paddles and mixing spoons to help them arrange the fruit. After it was packed they poured in the sirup until it reached almost to the top of the jars. They left about one fourth to one half inch for the fruit to swell while cooking.

The covers and rubbers had been sterilizing with the

jars, and after the jars were filled they were put on. The covers were adjusted and the wire clamp put in place but not sealed, for there had to be some place for the escape of the steam made in the jars.

5. Adjust-
ing the
rubbers and
covers.

Miss Ashley had the girls test the rubbers by pulling them to see whether they would stretch out of shape, and by bending and pinching to see whether they would



FIG. 8. — New rubbers should be used every year.

crack. New rubbers, she said, should be used every year (Fig. 8).

“After the way we have handled it I should think there would be germs on this fruit which would cause it to spoil even though we did sterilize the jars,” said Natalie, who was bound to have the canning a success. “So there are,” said Miss Ashley, “and now we must do something to kill them and to cook the fruit.”

6. Cooking
the fruit
and killing
the
“germs.”

Then the girls learned why the wash boiler was on the stove and how to finish the canning process.

Miss Ashley explained that it was necessary to have a rack in the bottom of the boiler so that the jars would not crack by coming in contact with the bottom of the kettle (Fig. 5).

The girls used one made of wood, but metal wire window screening cut to fit the bottom of the kettle might have been used.

The girls lifted their jars into the kettle with a lifter like the one in Fig. 9. The water was warm and rose an inch above the top of the jars. Miss Ashley explained that the water in the kettle should be about the same temperature as the fruit and the jar in order to keep the

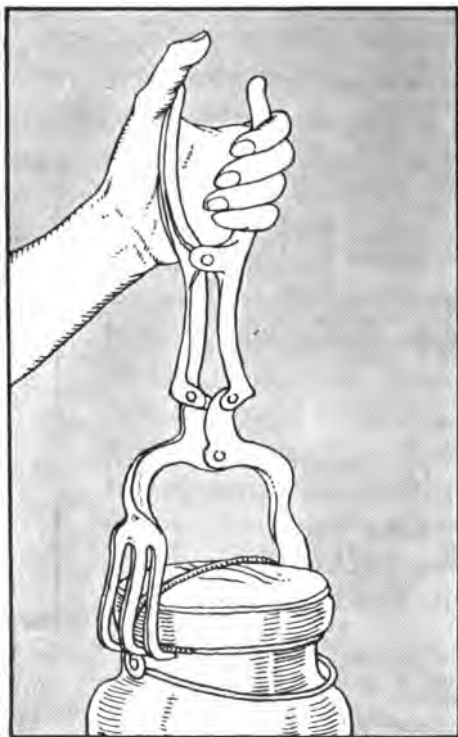


FIG. 9. — A good jar lifter.

glass from cracking. The girls were careful in putting their jars into the kettle not to have them touch each other. Both gas burners were turned on and the water was brought to a boil. One of the girls watched the

clock, for the peaches were to be left in the boiling water for just twenty minutes after the water started to boil.

7. Care is necessary in lifting covers from kettles in which steam is forming.

Miss Ashley cautioned the girls about lifting the covers from kettles in which steam is collecting (Fig. 10). The cover should be lifted away from one so that the steam may go in the direction opposite the person.

After the jars were sterilized in the steam

8. Removing the jars.

and hot water, and the steam

had been allowed to escape, Miss Ashley lifted them out and placed them on a board covered with several towels. She said she put them on this to keep them from becoming chilled too quickly, as rapid cooling might crack the glass.

9. Tightening the covers.

Then the jars

were sealed by putting the wire clamps in

place.

The girls were not satisfied with their work until they had washed the jars and polished them so that they shone. They then pasted on some white labels and said that later they would print the date.

10. Washing jars and labeling.



FIG. 10.—Lift the cover away from you.

Attractive labeling, Miss Ashley said, was just as necessary for the jars in the home fruit cellar as for those to be offered for sale. It is always a good idea to put on the name of the contents of the jar when these may not be seen, and the date of canning, for future reference.

After the class had washed the dishes and put the kitchen into nice condition one of the girls asked Miss Ashley whether all fruit could be canned in the way that they had canned the peaches. Miss Ashley said that the same method could be used but that the length of time for processing (*i.e.* cooking the fruit after it has been put into the jars) differed according to the kind of fruit used. She told them, too, that it was best to blanch nearly all fruits by dipping them first into boiling water and then into cold water according to the table she would give them. This is the table.

CANNING FRUITS (Hot water process)

<i>Fruit</i>	<i>Blanch</i>	<i>Size of jar</i>	<i>Process (or boil with fruit in jar)</i>
Apples (pare)	1 min.	1 quart	12 min.
Berries		1 quart	12 min.
Cherries	15 seconds	1 quart	25 min.
Peaches	15 seconds	1 quart	20 min.
Pears (pare)	15 seconds	1 quart	25 min.
Plums	Prick with needle to keep from bursting	1 quart	15 min.

The sirup for canning may be made by using more or less sugar than was used for the peaches and should be poured over the fruit before processing. She also told them that there were other methods of canning but that this one was considered to be one of the best. Some people cook the fruit before they put it into the jar, but you can see that by this method it might lose its shape in the handling after it is cooked and, too, it is more difficult to put hot fruit into a can than cold. The finished product is not usually so attractive.

“Miss Ashley, we haven’t a wash boiler in our apartment because there is no place to store it,” said

VII. Dif-
ferent
equipment
may be
used.

Constance, who lived in the apartment two floors below Miss Ashley’s, and was looking forward to canning something at home. “What kind of large kettle have you?”

Miss Ashley asked. Constance thought and then remembered three or four utensils which would answer the purpose very well. Her mother had a ham-boiler, an eight-quart enamel preserving kettle, and a large lard can, any one of which would do very well. One of the girls said that her mother had used their new garbage can, but that it was used only before it had been used for garbage. Miss Ashley said that any large kettle or utensil might be used, but that some kind of rack must be placed in the bottom and that it must have a close fitting cover. “And we do not have a wire basket to use for blanching,” said one of the girls. “Neither do I,” said Miss Ashley, “so I am

going to use a square of cheesecloth," and she took one from her desk and showed the girls how the fruit might be put into a square of clean cheesecloth and dipped into the water (Fig. 11).

The girls admired their results as they left the kitchen and could hardly wait to tell their mothers what they had done at school that day.

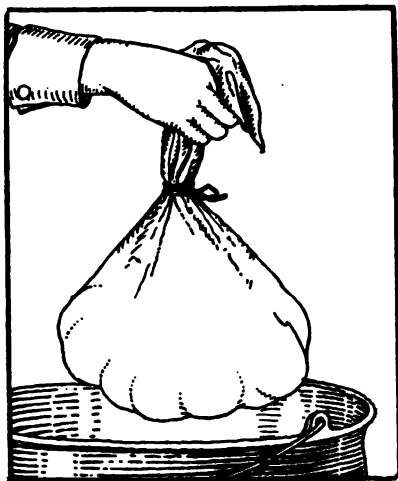


FIG. 11. — Another way of lowering fruit into boiling water.

Their mothers, too, were busy getting ready for winter, and **VIII. Home** in nearly every **work.**

home some kind of pickling, preserving, jelly making, or canning was taking place. Natalie and her mother talked about the things that Natalie had learned in school that day and Mrs.

Underwood said that she would like to try the method Miss Ashley had given them, but that she wanted to can some plums. "Mother, wait until Saturday and let me help do it. Please do, for I know I can do all but lift the jars out of the kettle." Such an offer could not be refused, and that is the reason why Mrs. Underwood got her Saturday morning's work done early and nine jars of plums canned besides!

Natalie enjoyed washing the plums and pricking each one with a large needle a few times before filling the jars. She washed the jars first and made the sirup, just as she had done in school, and all her mother had to do was to lift the jars out of the kettle.

It was hard to tell who was most pleased when Mr. Underwood came home, he, or his wife, or Natalie.

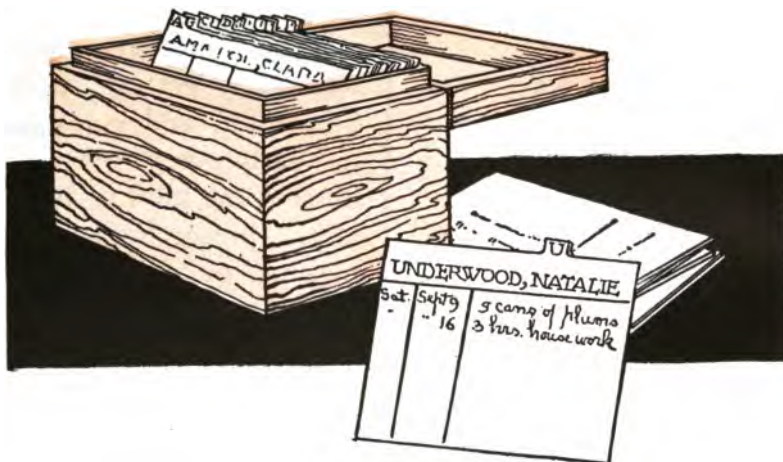


FIG. 12. — The girls recorded at school the work they did at home.

When the class met next time over half of the girls had helped put up some kind of fruit and each wanted to tell about it. One of the girls suggested that a record of their home work be kept and that is what you may read if you look into that card catalogue on Miss Ashley's desk. Each girl had a card on which she recorded the work she did at home, and it was fun to watch their records grow (Fig. 12).

The committee that was supposed to plan the home-making work asked Miss Ashley whether they might can tomatoes, for there were so many on the market and nearly everyone liked them in the winter. Miss Ashley told them that the seventh-grade girls had canned tomatoes and that the eighth-grade girls could make jelly next time. She also told them that she had put some pamphlets and magazine articles on jelly and jelly making in the library and on their reference shelf some books which would give them information which they might like to have. That was something new to them. They did not know that people wrote books and magazine articles about such things, and the librarian was surprised to hear the girls asking for them. Their reading and studying accounted for the interesting lesson that followed during the week.

**IX. Plans
for another
canning
lesson.**

SUGGESTIONS FOR REVIEW

1. Of what use is fruit to the body?
2. Tell how you would sterilize the jars used in canning fruit.
3. Why is it necessary to sterilize the fruit?
4. By looking at the table for information write a recipe for canning pears.
5. What method is there for canning fruit other than the one which the girls used? Which method do you think is the better?

LESSON 2

JELLIES, JAMS, AND PRESERVES

Another lesson on preserving food.

“Isn’t it strange, Miss Ashley, that our science teacher should have given us a lesson on jelly just the same week that we are going to make some in this class?” Miss Ashley smiled, did not tell all she knew, but asked, “What did you learn that will be of help to us in this class and at other times if you should want to make jelly?”

I. What the girls learned in their science class and from their reading.

Nearly every girl had a contribution to make in answer to this question. Their answers may be of interest to you.

“I had never thought anything about how jelly was made, but now I know that fruits contain a substance called pectin. When fruit juice and sugar are cooked together in proper proportions the pectin causes the juice to jelly,” volunteered Dorothy Vincent, who was very fond of jelly and who had a great curiosity about everything. She continued, “Not all fruits contain the same amount of this substance so not all are as good as others for jelly making. There has to be a certain amount of acid present also or the jelly will not come.”

1. What causes fruit juice to jelly.

“Mr. Lockman said that there was usually more pectin in underripe fruit and that for jelly-making purposes underripe fruit should be chosen, but that

some ripe fruit could be added to improve the flavor. We performed an interesting experiment to prove that pectin was found in some fruit juices (Fig. 13). We took equal quantities of juice and grain alcohol (95% pure) and mixed them together very carefully and then poured the mixture into a dish. From some of the juices we got big jelly-like clots and from others just little ones. Mr. Lockman said that when the juice gave one big clot we should use one cup of juice and three fourths of a cup of sugar to make the jelly." Constance surprised everyone with this recitation, for until now the girls hadn't quite known why he had told them that.

"Now we will know how to find out whether our juice will make good jelly," said Miss Ashley.

"We already know, Miss Ashley, that those dead-ripe grapes in that basket won't do it," said the girls, "and that the half-ripe ones will, because we tried it. We know, too, that the crab apples will make lovely jelly; we tried them, too.

2. What fruits make jelly easily.

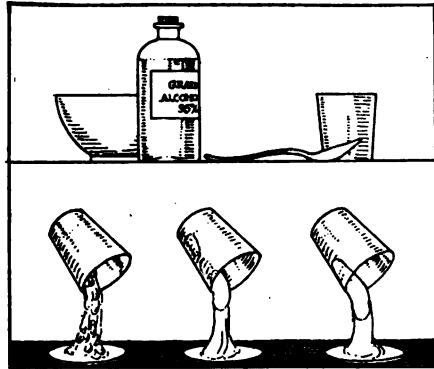


FIG. 13. — Making the pectin test. When the juice and alcohol make one nice big clot three fourths of a cup of sugar to one of juice may be used.

3. Fruits good for jelly making.

Apples and grapes, when not too ripe, currants and oranges — all are good, and other fruits that do not jelly well by themselves may be added to apple juice to make pleasant flavors.”

The seventh-grade girls had worked in the kitchen that morning and had gotten several quarts of crab apple juice and grape juice ready for the eighth-grade girls to make into jelly. They took the crab apples, which were so pretty and red,

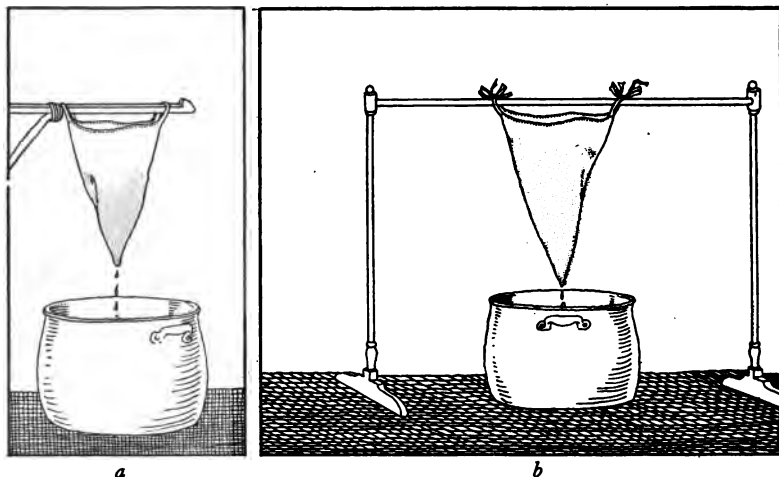


FIG. 14. — Jelly bags. (a) Suspended from a hook; (b) suspended from a towel rack.

washed them thoroughly, cut them into small pieces without paring or coring, washed them again, put them into a large kettle, covered them with water, and set them over the fire to cook. When the apples had been thoroughly cooked and

1. Getting the juice from the fruit.

mashed, they put the pulp into a jelly bag which they had first wrung out of hot water, and allowed the juice to drip into a large bowl below. To make the grape juice they first washed the bunches of grapes, then picked the grapes from the stems, washed them again but were careful not to mash them, and put them on to cook in just enough water to cover. When they were thoroughly cooked the pulp

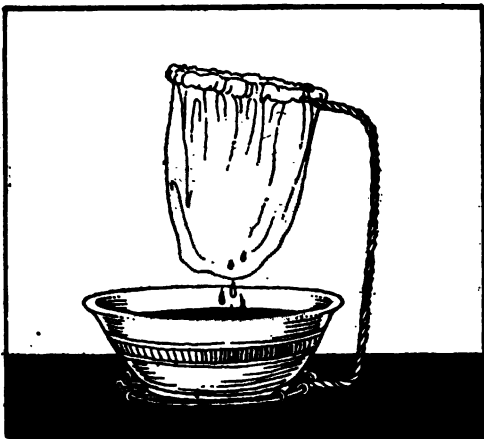


FIG. 15.—Commercial jelly bag.

was put into a jelly bag and hung over a bowl to drain.

The girls made the jelly bags out of some flannel that Miss Ashley provided. They looked like Fig. 14. It is not always easy to know where to hang the jelly bag to let it drip. In this case the girls tied the bags to the towel racks, which they set upon the table. There are commercial strainers, as shown in Fig. 15. Dorothy Vincent said that her mother fastened a good strong hook over her table and that it was an excellent thing from which to suspend the jelly bag (Fig. 14).

The girls brought various kinds of glasses and jars they found on their own pantry shelves in which to pour the jelly. These they washed and scalded very carefully. Miss Ashley had bought some paper containers at the grocer's for use in case there were not enough glasses.

3. The jelly glasses.

After what the girls had learned in general science they decided that they would use three fourths of a cupful of sugar to one each of apple juice or of grape juice. Some of the girls wanted to mix the juices just to try something new and Miss Ashley was glad to let them.

4. Proportions of juice and sugar.

The girls, working in groups of two, used two cupfuls of juice and the proper amount of sugar and cooked the two together until the mixture fell in big flakes or sheets from the side of the spoon. They did a great deal of testing. At first the sirup just ran from the spoon like water, then after it had boiled about five minutes big drops fell, and soon the big drops ran together and fell off in one big jelly-like flake. This showed that the jelly was done.

5. Cooking the jelly.

They then poured it into the glasses, which had been boiled in water and were standing on a cloth placed on a board. The very hot jelly is apt to crack glasses unless they, too, are hot.

After the glasses were filled and the sides carefully wiped they were set aside on a table and covered with a sheet of white paper just to keep out the dust while the jelly cooled.

6. Covering the top.

After school that day the girls returned to pour melted paraffin over the top. They melted the paraffin in a lipped kettle and all used from the same supply (Fig. 16). The layer of paraffin keeps any mold from forming on the jelly.

Then the covers were put on. The girls tied paper over the glasses which had no covers but were glad that they had tight-fitting tin covers for nearly all.

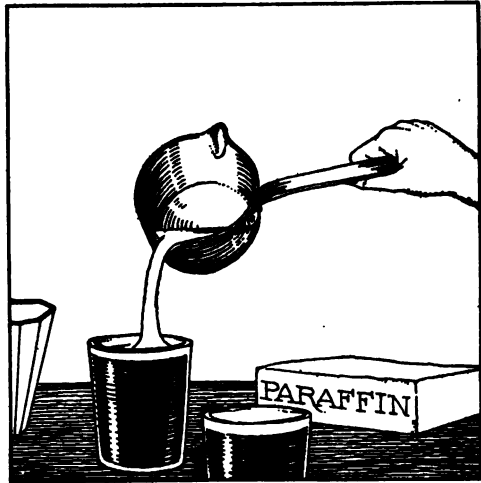


FIG. 16. — Paraffin keeps mold from forming on the jelly.

Of course each girl wanted to tell what kind of jelly was in the glasses which she had made, and some very neat labels were printed and **7. Labeling.** pasted on.

Since this jelly was to be sold it was necessary to know what price to ask for it. The bills for fruit and sugar had been kept, and the girls got to **8. Figuring the cost.** work figuring the total expense and the cost of producing each glass. They added 10 per cent to the cost as a fair profit for their labor.

Miss Ashley told the class that she always figured

the cost of the fruit she canned and the jelly she made to know whether or not it paid her to do it. Some women find that it is cheaper for them to buy canned fruit, jams, and jellies because the cost of labor and fuel added to the cost of the fruit makes it more expensive than the commercial product. But where fruits are produced at home, of course it is wise to utilize them.

Nearly everyone enjoys the home product best, and every housewife enjoys going to her fruit cupboard in the winter.

“Aren't we going to do anything with the pulp?” inquired Constance, who had watched Mrs. Edwards make a kind of grape jam one Saturday. Miss Ashley told her that another class would press the pulp through a purée strainer, add an equal amount of sugar, cook it for ten or fifteen minutes, and put it into jars much the same as they had done. She explained that when fruit is expensive it is economical to use the pulp as well as the juice, and that a good fruit jam can be made. Fruit with all the juice left in it makes a more finely flavored jam, and is easily made by using any kind of soft fruit such as berries, peaches, or grape pulp, mixing it with an equal amount of sugar, and cooking for about ten minutes or until the mixture thickens, when a spoonful is cooled on a saucer.

Some women like to cook peach butter and apple butter a long time to develop a special flavor that is enjoyed.

The interest in canning and jelly making was so great that the girls wanted to continue, but Miss Ashley assured them that there were other interesting and necessary things to do and suggested that since they knew how to can and how to make jelly they practice at home. The "Home Work" cards told of canning plums, peaches, and tomatoes, and of making different

IV. A booklet of choice recipes to sell at the fair.



FIG. 17. — Jars of fruit to be sold at the League Fair.

kinds of jelly, and some of the girls had helped with jams and preserves (Fig. 17).

As the girls glanced over the work that different ones had done one said, "I wish I knew how to make the peach butter that Edith helped her mother make"; and another, "I wish I could make some plum conserve like my cousin makes"; and still others wished that they could learn how to make various other good things.

This gave Constance an idea: "Why can't we collect recipes and then ask our mothers to let us try them?"

"Maybe our mothers would like the recipes."

"Oh, I know; let's make a little booklet of recipes of jellies, jams, and preserves, and sell it at the fair"

(Fig. 18). And that is the way the booklet originated. You know the rest. The girls collected only "choice



FIG. 18. — A book of recipes to sell at the fair.

and tried recipes that could be vouched for." One of the girls in the commercial class typed them and Miss Washburn, the art teacher, helped to design the booklet. A few of the recipes contained are given below.

As the girls brought their recipes to school they copied them on cards and began to make a card index file of recipes for their school kitchen, too.

GRAPE JELLY

Wash the grapes and remove stems. Put into a granite kettle and cook slowly until grapes are soft. Mash as they cook, and drain through a coarse sieve. Allow the juice to drip through a double thickness of cheesecloth or a flannel jelly bag.

Measure the juice, and add three fourths as much sugar. Boil until it stiffens slightly when dipped on a cold saucer. Turn into sterilized glasses and put in a sunny window for twenty-four hours. Cover with paraffin and keep in a cool, dry place.

APPLE JELLY

Wash and quarter tart apples and cover with cold water; boil until soft and strain through a jelly bag. Allow three fourths of a cup of sugar to one cup of juice. Cook until it jellies.

CURRANT JELLY

Pick over the currants but do not remove stems. Wash and drain. Mash with a wooden masher and bring to a boil in their own juice. Strain. Allow an equal amount of sugar and juice. Stir until sugar is dissolved. Boil about three minutes and pour into glasses.

GRAPE FUDGE (a conserve)

3 pounds grapes	$\frac{1}{4}$ pound English walnuts
3 pounds sugar	$\frac{1}{4}$ pound raisins

Wash and pulp the grapes. Heat pulp. While pulp is heating chop raisins, skins, and walnuts. Rub pulp through sieve to remove seeds. Mix all together and cook from 15 to 20 minutes. Put into jam jars.

YELLOW TOMATO PRESERVES

3 pounds little yellow tomatoes	1 ounce ginger root
3 pounds sugar	juice of 3 lemons

Wash the tomatoes. Cover the tomatoes and sugar with boiling water, put in the lemon juice and ginger, and cook until the tomatoes are clear. Skim out the tomatoes and allow the juice to boil until thick. Return the tomatoes. Boil five minutes. Fill the jars and seal.

PLUM MARMALADE

Wash the plums and cut into quarters. Put in a kettle, add a small amount of water, and cook slowly until soft.

Rub through a strainer, add an equal quantity of sugar, and cook until the liquid thickens. Put into jelly glasses. Seal with paraffin.

HOUSEHOLD ARTS

AMBER MARMALADE

1 large orange 1 lemon
 1 grapefruit

Wash the fruit. Cut fruit into quarters and shave into pieces. Reject all seeds and cores. Measure fruit and add twice as much water. Let stand overnight.

Next day boil for five minutes. Add pint for pint of sugar and juice and let stand again until the following day.

Cook gently for about two hours or until it jellies. Stir as little as possible.

Pour into sterilized glasses.

RHUBARB-ORANGE MARMALADE

4 cups rhubarb 4 oranges
 4 cups sugar

Wash the rhubarb, cut into pieces, and measure.

Use the pulp and the juice of all the oranges and the rind of one or two. Add the sugar to the rhubarb and orange, and cook until the mixture thickens like jam. This is nice in the spring and early summer.

SUGGESTIONS FOR REVIEW

1. How would you test fruit juice to determine its jelly-making properties?
2. Name several fruits that are good for jelly making.
3. How can you tell when the jelly is done?
4. Could you make apple jelly alone? How would you do it?

LESSON 3

OTHER WAYS OF STORING FOOD FOR WINTER

“The odors that come from that kitchen fairly make my mouth water,” said the delivery boy as he passed Miss Ashley in the hall. Vinegar and spice, and onions, too, gave away the secrets of the kitchen, and the several classes could hardly wait their turn, for each knew that something good would be added to the cupboard in the corner. This week was to be given over to preserving food by methods the girls had not tried before, and they always looked forward to something new.

They knew by the spicy odors in the hall that some kind of pickling was going on. Pickling, Miss Ashley told them, is one of the oldest methods of preserving food and has been in use since primitive times. The term pickling is applied to the process of preserving food when either salt or vinegar is used. Sometimes the word brining is used when salt is the preservative. We sometimes brine meat, such as pork or beef, and call it pickled pork or corned beef, and we sometimes brine vegetables, too. Cucumbers are very commonly put into salt water to keep them until they may be made more palatable for use; cabbage is salted and finally becomes kraut.

One of the classes in an industrial arts lesson pickled some cucumbers by brining them. They selected cu-

cucumbers about three or four inches long, scrubbed them very clean with a vegetable brush, and put them into a stone jar. Then they poured over the cucumbers a brine which they made by dissolving two cups of salt in one gallon of water. The cucumbers were just covered with it. Over the top they placed a plate and held it down with a clean stone so that none of the cucumbers would be

a. Pickling
or brining
cucumbers.

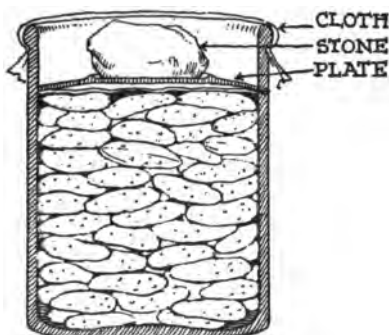


FIG. 19. — Cucumbers may be stored by brining them.

out of the brine. A piece of cheesecloth was tied over the top to keep out the dust and yet let in the air (Fig. 19). Miss Ashley said that air was necessary.

Several days later when they looked at the cucumbers little bubbles could be seen which, Miss Ashley said, showed that fermentation was taking place, or that an acid was forming, and that when the bubbles ceased forming it would be best to seal the jar. One day when they looked no more bubbles were rising but instead a little white scum had appeared. This Miss Ashley removed with the cheesecloth. One of the children washed the plate and stone and replaced them, and then the jar was sealed by pasting a piece of paper over the top and well over the edge. Later in the year

these cucumbers could be freshened by soaking in clear water and could then be made into sour pickles or spiced pickles by adding plain vinegar or vinegar that had been sweetened and spiced.

Vinegar is sometimes used to preserve food, and of course when it is used gives a sour taste to whatever it is added. Sour pickles are known to nearly everyone. When spice is added we sometimes call the product spiced pickle, and if sugar is added so that the product is sweet the product is called sweet pickle.

2. The use of vinegar, sugar, and spice.

Meats, as well as vegetables, are preserved in vinegar. Sour tongue and pickled pigs' feet are not at all uncommon foods, and sour fish, such as pickled herring, is used in great quantity by many people.

When we speak of pickle we usually mean some kind of vegetable or fruit mixed with vinegar and spice. We find that in nearly every home some kind of pickle is used. It is used because of its pleasant flavor, to stimulate the appetite, or to make something not particularly palatable more so. Pickles, with the exception of some of the sweet pickled fruits, give little nourishment, and one should be careful not to cultivate the habit of using them, for their constant use prevents the enjoyment of the natural flavors of food and one does not enjoy the food for its own sake. It is not wise for school girls to get the pickle-eating habit. It would be better if the craving for acid were satisfied by the

3. The use of pickles in the diet.

many delicious fruits which are on the market the year round.

Margaret Langley thought of the pickle jar in her mother's pantry from which she helped herself so frequently, and wondered whether she might not be better off by eating apples and oranges instead. How about you?

"Now, since nearly everyone wants some kind of pickle once in a while," continued Miss Ashley, "and it is cheaper to make it than it is to buy, we ought to know how to make some. Dorothy's mother has asked us to make some for her and

has sent in the materials and a recipe for chili sauce. She says that you may have one fourth of what you make as your share for the fair. All of the vegetables were grown in Dorothy's garden, which she and her father tended."

The girls unpacked the basket with eagerness, and this is what it contained: Ripe tomatoes, green peppers, onions, celery, packages of

4. The girls
make chili
sauce.



FIG. 20. — A basket of vegetables from Mrs. Vincent's garden. To be used for pickle.

cinnamon, salt, and sugar, a bottle of vinegar, and a bunch of flowers from Mrs. Vincent's flower garden (Fig. 20).

As it was Dorothy's recipe she wrote it on the board as follows:

TOMATO CHILI SAUCE

12 large ripe tomatoes	2 tablespoonfuls salt
2 large onions	1 tablespoonful cinnamon
2 green peppers	$\frac{1}{2}$ cup sugar
1 medium bunch of celery	3 cups vinegar

Peel and cut up the tomatoes. Remove the seeds from the peppers and cut into small pieces; clean the celery carefully and cut into small pieces. Put all the ingredients together in a granite kettle and boil for an hour and a half. Put into bottles and cover with paraffin.

Dorothy explained that more mixed spices might be added, but that they liked the sauce mild. The girls removed the tomato skins the way they did the peach skins. Miss Ashley told them to remove the seeds from the peppers under water quickly and to wash their hands thoroughly afterward, for the peppers cause the skin to smart.

The girls decided to work in groups of fours the first day to get the mixture ready to cook, but they had to finish it another day for lack of time. When finally they did finish it, they poured the sauce into wide-mouthed bottles from which pickles or olives had been removed, poured paraffin over the top, and

pasted paper over the mouths of the bottles to keep out all dust.

“Miss Ashley, why did Mrs. Vincent say that we should cook the chili sauce in a granite kettle?” asked thoughtful Natalie. “Because Mrs. Vincent knows that the acid of the pickle acts on metal utensils such as iron or tin, and that these should not be used. Neither should we use tin spoons for stirring; wooden or granite ones should be used” (Fig. 21).

5. Care is necessary in the choice of utensils for pickling.



FIG. 21. — A granite kettle and a granite or a wooden spoon should be used when cooking pickle.

After school when the girls compared notes they found that the ninth-grade class had made spiced crab apples. The following recipe had been used, and other recipes had been given the girls to take home.

6. The ninth-grade girls made sweet pickle.

SPICED CRAB APPLES

1 pint vinegar	$\frac{1}{2}$ tablespoonful cinnamon
1 pint sugar (light brown preferred)	$\frac{1}{2}$ tablespoonful cloves
	$\frac{1}{2}$ teaspoonful mace
	Good red crab apples

Boil the vinegar, sugar, and spice together. Wash the crab apples, leaving them on the stems, prick them several times with a fork, and drop them into the sirup. Heat very gently so that the apples will not break, and let them stand in the sirup overnight. Pack into jars, cover with sirup, and process for about twenty minutes in simmering water.

Some recipes for the book and the card catalogue :

SPICED GRAPES

5 pounds grapes	1 tablespoonful cloves
1 pint vinegar	1 tablespoonful cinnamon
1 tablespoonful allspice	$\frac{1}{2}$ tablespoonful mace
	4 pounds sugar

Wash and pulp the grapes and heat slowly about five minutes. Turn into a coarse sieve and press the pulp through. Add the skins to the pulp. Make a sirup of the vinegar, sugar, and spice. Boil the fruit in this sirup one half hour, or until very thick.

OIL PICKLES

25 small cucumbers (3 or 4 inches long)	$\frac{1}{2}$ ounce white mustard seed
	$\frac{1}{2}$ ounce celery seed
1 pint small white onions	$\frac{1}{2}$ ounce ground pepper
1 cup salt	1 cup olive oil
Vinegar enough to cover	

Scrub the cucumbers and cut into thin slices. Peel the onions and slice. Put in the container alternate layers of onions and cucumbers and the cup of salt. Let stand overnight. Next morning drain and rinse well with cold water. Place in a jar alternating layers of cucumbers, onions, and spice. Add the oil. Cover the whole with cider vinegar.

GREEN TOMATO PICKLE

- | | |
|------------------------------|---------------------------------|
| 1 peck green tomatoes | 3 cups brown sugar |
| 12 medium sized onions | 2 tablespoonfuls mustard |
| 2 tablespoonfuls salt | 2 tablespoonfuls pepper berries |
| 3 pints vinegar | 1 tablespoonful whole allspice |
| 1 tablespoonful whole cloves | |

Wash the tomatoes and cut into slices. Peel and slice the onions. Add the salt and let drain overnight. Add the sugar, vinegar, and spices (tied in a bag) to the sliced tomatoes and onions, and cook just long enough to make them tender.

Drying is another very old way of keeping food. In our grandmother's time strings of dried pumpkin

and apples were another way of keeping food. common, as were bags of dried corn, beans, and peas

(Fig. 22). We all know about raisins, prunes, currants, and dates, which are very valuable forms of dried or evaporated food; but not until recently have we been particularly interested in the home drying of all kinds of fruits and vegetables. The World War made it necessary to pay more attention to saving food than ever before,

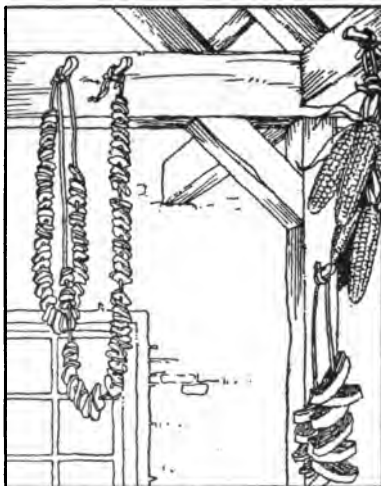


FIG. 22. — Strings of apples, pumpkin, and popcorn hung in Grandmother's attic.

and drying became a very

popular method. Foods will not spoil if the water in them is removed, and drying simply means removing sufficient water from the food to prevent its spoiling.

Food is dried at times because it requires less space for storage, is lighter than canned food and costs less to ship, and can be packed in less expensive containers. Then, too, the variety that it gives to the diet is pleasant.

Many persons have been prejudiced against dried fruit at times because of the poor quality on the market or because it had not been properly packed and insects had gotten into it. Sometimes it has not been properly cooked and this caused a distaste for it. The old-fashioned methods of drying and storing have

1. Reasons for drying.

2. Prejudices against dried fruits have been overcome.

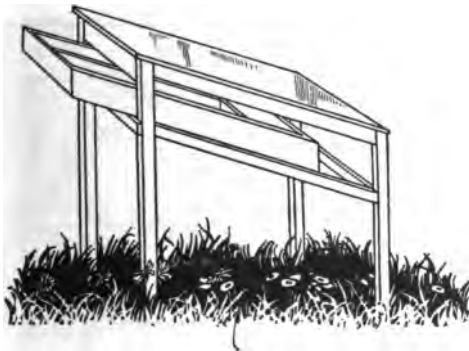


FIG. 23. — A frame for sun-drying.

given way to the sanitary methods of to-day, and very fine qualities of dried foods are obtainable. Methods of cooking are better understood, too, and dried fruits and vegetables may be made very palatable and quite nourishing and wholesome. We will learn in a later lesson how to cook some of the dried fruits and vegetables.

Fruits and vegetables may be dried in several ways. One of the easiest ways is to clean and slice the

3. **Methods of drying.** fruit, put it on

a wooden tray, and expose it to the hot sun for several days (Fig. 23). It should be so arranged, or turned frequently, that it will dry as quickly as possible, and should be covered with glass or mosquito netting to keep insects and flies

away. Another simple home method is to put small amounts of fruit on plates and set them over kettles of

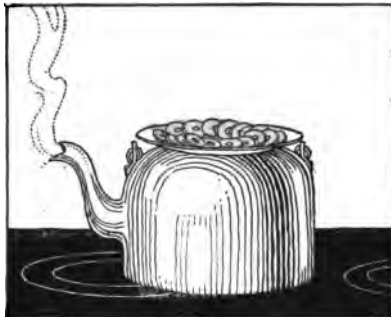


FIG. 24. — Fruit may be dried by placing it over a kettle of hot water.

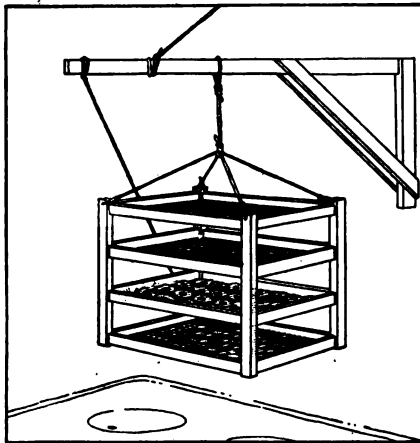
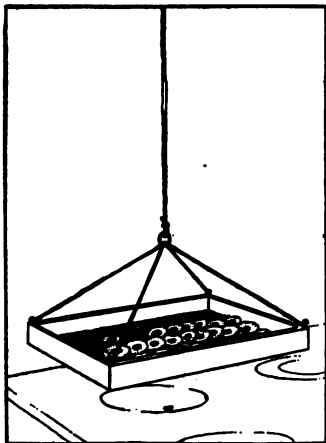


FIG. 25. — Drying frames suspended over the stove.

hot water or in the warming oven (Fig. 24). The idea in any case is to provide heat and a circulation of air, to keep the food clean, and to hasten the process as much as is consistent with good results.

During the War, when large quantities of fruits and vegetables were dried, various kinds of apparatus were



FIG. 26. — Dried foods should be properly stored.

securely tied, or into covered jars (Fig. 26). It must be kept away from dust, insects, and mice, and in a dry place.

Several of the girls had helped their mothers to dry various fruits and vegetables, and gave some interesting reports. They were asked to write a description of the process so that others might use their methods later.

used and many experiments were made to find out the best methods. The pictures show some of the driers that are considered good (Fig. 25).

It is very important that all dried food be properly stored. It may be put into paper bags

4. Storing dried fruits and vegetables.

5. Home reports on drying.

DRIED CORN

Choose good, tender, sweet corn. Boil on the cob for about six minutes in salted water. Remove from the water. With a sharp knife cut the grains from the cob, cutting only about half-way down to the cob, and scrape out the rest of the grain with the dull edge of the knife. Place in thin layers on a cheesecloth screen and set in a warm oven for four or five hours or in the hot sun until very dry. Store in clean containers in a dry place.

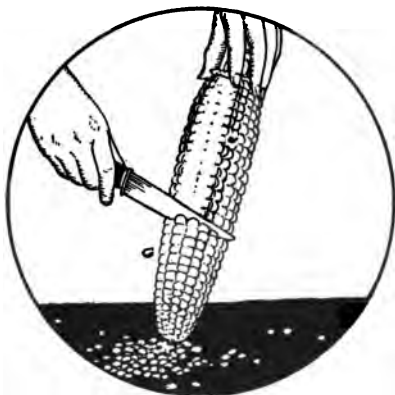


FIG. 27.—Dried corn is a delicious food.

DRIED CHERRIES

Wash and dry the cherries. Pit them; drain off (and use) any of the juice. Place on a plate and stand over a kettle of hot water or in the oven when the fire is going out. Some people dry cherries without pitting them.

Berries may be dried in the same way as cherries.

DRIED APPLES

Cut the peeled and cored apples into rings or slices about one fourth of an inch thick. Plunge them into boiling water for a minute. Dry on a cloth. Arrange in layers on a tray and set over the hot stove or in the sun. Sun drying in the fall of the year takes several days in those places where the rays are not hot.

For those who have cellars or back yards where pits may be dug it is possible to store fruits and vegetables in their natural condition. Many families who plant

gardens raise enough vegetables for winter use. It is easy to keep potatoes in barrels or boxes in the cellar provided it is not too warm, and carrots, beets, turnips, salsify, parsnips, celery, and other vegetables may be kept, too.

III. Storing vegetables and fruits.

The root vegetables may be stored in layers of sand.

Dry seeds, such as beans of various kinds, and peas, should be kept where it is warm and dry.

A barrel of apples is usually cheaper in the autumn than later and is a good investment. Apples should be kept in a cool place.

It is difficult when one lives in an apartment to store much food at any one time, but many families who have gardens and cellars grow and store enough vegetables for use during the entire winter.

SUGGESTIONS FOR REVIEW

1. Suggest several ways of keeping vegetables for winter use.
2. Name some fruits and vegetables that may be pickled. Tell how it may be done
3. How may foods be dried? Why does food keep when dry?
4. Make a list of vegetables that may be stored in their natural condition. How would you store them?

LESSON 4

A NECESSARY LAUNDERING LESSON

The Sunnysiders launder the aprons and towels they have been using.

After several days of handling fruit the girls found that their aprons and hand towels were soiled and

stained. Fruit juice had even gotten on their caps, too, and they no longer felt quite as respectable as they should. At first they wanted to take the soiled garments home, but Miss Ashley suggested that washing and ironing could be done at school. The tubs in which the dish towels were washed daily could be used.

I. Home making includes washing and ironing.

“But the dish towels do not look very clean. They are stained, and I want my apron to look white,” said Margaret Langley, who remembered, possibly, the day she had helped her mother wash and had got a blister on her hand. “The towels are stained because we did not take the trouble to remove the stains before washing them in soap and water. Before you wash your aprons let us take out all the stains and see if we cannot restore them to their original whiteness.”

Miss Ashley explained to the girls how necessary it is to remove all stains from any kind of clothing before putting it into the wash tub, for sometimes soap or even hot water will set a stain and it may never come out.

Most of the aprons had fruit stains on them. The girls had handled peaches, grapes, plums, and other fruits. Some of the stains were sticky from the sirup.

Miss Ashley took one of the aprons and showed the girls how to treat the grape juice stain. She spread the stained part over a bowl and poured boiling water over it from a height of about two feet so as to strike the stain with force, then

1. Grape stain.

plunged the stained part up and down in the hot water (Fig. 28). This dissolved the sugary film that

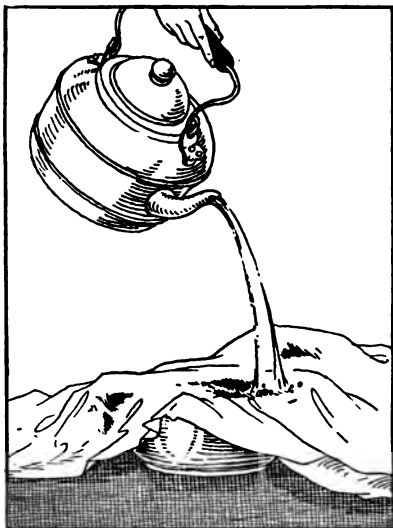


FIG. 28. — Remove fruit stains by pouring boiling water over them from a height.

held the juice and floated the juice out. “Why couldn’t we put the whole apron right into boiling water?” asked Natalie. “You could, but there might be some stains that the boiling water would set, and some stains like this peach stain that would be overlooked.”

Peach stains are not easy to remove and one should be careful not to wipe

2. Peach stains.

the hands covered with peach juice on a good napkin, towel, or apron. Miss Ashley took a bottle marked “Javelle Water” (Fig. 29), and poured some of its contents on the stain, which was spread over a bowl, and then poured boiling water on very slowly. She dipped the stain up and down, then poured out the Javelle water and rinsed the wet part in clear boiling water. The stain was gone. She said that it was necessary to rinse out all the Javelle, as it might weaken the fiber or even make a hole in the apron.

Edith Potter had been careful about the fruit stains, but one day while peeling the onions for the chili sauce she had cut her finger and got some blood stains on her apron. "How shall I take these out, Miss Ashley?" she asked. Miss Ashley told her to take lukewarm water and rub the stain until it disappeared, and that a little ammonia would hasten it, since it was an old stain. Blood-stained garments should never be put into hot water as the heat hardens the blood and sets the stain.

Miss Ashley was afraid that the girls might burn themselves with the hot water so she had them heat only small amounts in their kettles and place the stains over large pans so that no one need get splattered with hot water.

After the stains were removed each girl washed her own apron, cap, and towel in a tub of clean suds. The water was changed when necessary. She used a wash board this time, and Miss Ashley showed her how to rub without rubbing blisters on her knuckles. After they were rubbed, the clothes were soaped and put into a boiler of warm water, brought to a boil, and boiled for about five minutes (Fig. 30). Do you know why the clothes were boiled?

3. Blood stains.

4. How the girls removed stains.



FIG. 29. — Javelle water will help to remove stains.

III. Washing and ironing the clothes.

- 1. Rubbing.**
- 2. Boiling.**

The clothes were lifted with a clothes stick from the boiler into a large pan and were well rinsed in two waters to remove the soap. If the soap is not well rinsed out, yellow spots may appear when the clothes are put into the bluing water. Bluing water was made in one tub and each piece was rinsed through it. The pieces were well shaken out before they were put into the bluing water so that they would not get streaked, and were not allowed to

3. Rinsing.

4. Bluing.

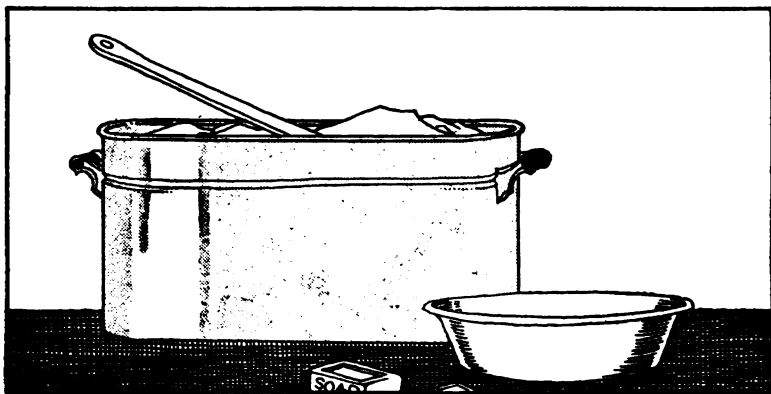


FIG. 30. — The clothes were boiled in soapy water for about five minutes.

remain, but were dipped up and down a couple of times and then wrung as dry as possible. While the clothes were in the boiler Miss Ashley taught the girls how to make starch, and later one girl in every four made enough for her group. Miss Ashley said that starch kept the clothes clean longer and made them look more like new.

5. Starching.

RECIPE FOR STARCH

1 quart boiling water	$\frac{1}{2}$ teaspoonful borax
$1\frac{1}{2}$ tablespoonfuls starch	$\frac{1}{2}$ teaspoonful fat

Mix the starch and borax with a little cold water to separate the grains; pour over the mixture the boiling water, stirring all the while; add the fat; boil gently for about fifteen minutes, stirring frequently to prevent burning.

The girls starched the caps and aprons by dipping them and rubbing them in the starch and then wringing them as dry as they could.

The clothes were then hung on the

6. Hanging and drying.

trolley clothes-line which was fastened to the side of the window (Fig. 31). The line was wiped first with a dry cloth to remove the dust, then with a damp cloth to insure its being clean. Garments of a kind were hung together. Each was well shaken first and enough of it was folded over the line so that it would not tear at the edges or corners.



FIG. 31. — Clothes should be dried in the fresh air and sunshine.

A committee of girls came up later in the day to take the clothes from the line. They were careful to fold them and to place them rather carefully in a pile, and not to crush them and push them into the basket. They put the clothespins into a bag and hung them in their proper place (Fig. 32).

7. Taking from the line.

At noon next day several girls came to the kitchen to sprinkle or dampen the clothes so that they would be

ready to iron later. They tried to distribute

8. Sprinkling.



FIG. 32. — A place for everything—even for clothespins.

the drops of warm water uniformly over the clothes but found it rather difficult. Miss Ashley showed them how to do it by dipping a whisk broom into water lightly and spraying the clothes with it. She also showed them how to sprinkle by using a spray nozzle. Each dampened

piece was rolled tightly so that the moisture would be distributed and later in the day the clothes were ironed.

The new ironing boards were used for the first time. Another class had padded and covered them. The fifth-grade class had made the iron holders out of old stockings covered with ticking.

9. Ironing.

There were several kinds of irons, but everyone liked the electric iron best (Fig. 33). The old-fashioned flat-

irons were more difficult to handle and kept the girls going back and forth to the stove.

The towels were easy to iron. The caps were not very difficult either, for there was one iron longer than the rest that ironed gathers especially well. The aprons took the most time. Miss Ashley said that it was well to iron dry as one went along,

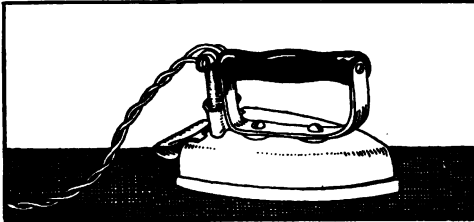


FIG. 33.—The girls enjoyed using the electric iron.

and not to take a new part until the old was dry and smooth. When she ironed she stretched the goods into shape, smoothed it out, and took an iron that “hissed” when she touched it with her moistened finger. Then

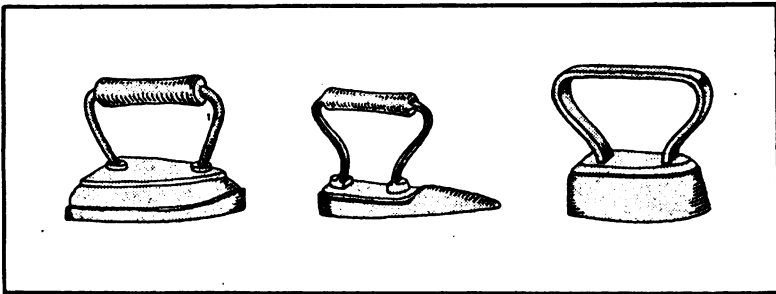


FIG. 34.— Notice the long iron in the center. Do you know what it is used for?

she moved her iron with the lengthwise threads rather quickly and was careful to get into the gathers, and around the buttons. She ironed the bibs and strings

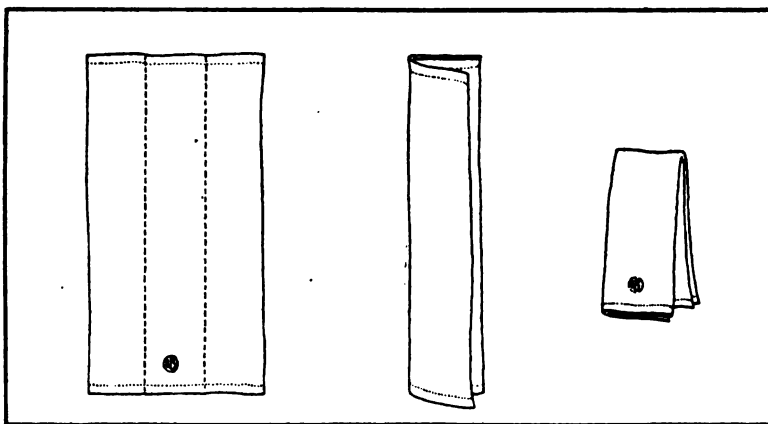


FIG. 35. — This is the way the girls folded their towels.

first on both sides and gave them another touch after the body of the apron was ironed. “My, how nice

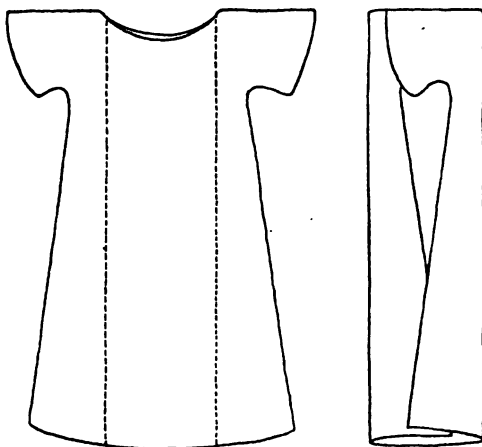


FIG. 36. — The aprons were folded like this.

her apron looked! She said that ours would, too, after we had done it as often as she had.” This is the way the girls folded their towels (Fig. 35). And this is the way they folded their aprons (Fig. 36).

Everything that had been used in

the laundering lessons was put away. The boiler, the boards, and the clothes stick were cleaned, dried, and were put each in its own place as were the irons and ironing board. Miss Ashley insisted that it is easier to find things if everyone obeys the old motto, "A place for everything and everything in its place."

10. Putting
away the
equipment.

SUGGESTIONS FOR REVIEW

1. How would you remove fruit stains from table napkins? What care should one exercise when eating fruit at the table?
2. Why is it necessary to remove all of the soapy water by thorough rinsing?
3. What care must be taken when clothes are hung on the line?
4. What care should be taken when they are removed? Why?
5. Suggest a few necessary things to remember when ironing.



CHAPTER II

LEARNING TO PREPARE LUNCHEON DISHES

After their success in canning and jelly making the Ellen H. Richards girls rather enjoyed working in the kitchen Saturday mornings with their mothers and asked Miss Ashley whether they could have some lessons at school which would teach them how to prepare some dishes for the home luncheon.

In many towns and cities where members of the family go to work during the day and do not return for the noon meal, dinner, or the principal meal of the day, is served in the evening and only a very simple meal or luncheon is served at noon. Your family may have dinner at noon and supper at night, but you may be interested in studying these lessons and may be able to make use of what is given here in connection with some other meal.

LESSON 5

MAKING PLANS FOR THE LUNCHEON LESSONS

Miss Ashley and her girls always talk over together any new problems that they undertake.

The eighth-grade girls were not long in discovering that they got more work done and did it better if they planned ahead so that they knew what to look forward to for several weeks. So before they started to cook anything they sat down one day and talked about the noon meal in their homes. They came to a good many general conclusions which no doubt many other people share.

I. What shall we have for luncheon?

1. Dishes should be simple and easily prepared.

They decided that the luncheon dishes should be simple and easily prepared. So long as the big meal of the day comes later when father and the older working members of the family can be at home to enjoy it, it is not wise to spend too much time at noon.

Getting breakfast, making beds, cleaning and dusting, and caring for the children do not leave mother a great amount of time to spend in preparing many or elaborate dishes. "And, too, there won't be so many dishes to wash if we don't have too many kinds of things to eat," said Dorothy, who always thought of her share of the home work.

When fewer members of the family are at home it is a good time to use the portions of food left from previous meals if there is not enough for the entire

family, and to serve the fresh foods for the family dinner when all may enjoy them. Many women plan their dinners so that there will be something left for the next day's luncheon.



FIG. 37.— Many women plan their dinners so there will be something left for next day's luncheon. Mrs. Underwood looks into the refrigerator before going to market.

2. Using left-over food.

There are many nice ways of using vegetables and meats that have been cooked the day before, palatable scallops and creamed dishes, and many appetizing salads that are easily prepared. By exercising care no food need ever be wasted and the food cupboard or refrigerator may always be kept free from scraps. "My mother always cleans the refrigerator

after breakfast; then she knows what she has on hand for the day and can make out a new grocery list if she needs to," said Natalie, whose mother was known to be a good housekeeper (Fig. 37). Miss Ashley agreed that this was a good plan.

Another thing that is very important in preparing any meal is to provide food that is suited to those who are to eat it. As a usual thing the younger members of the family, the growing boys and girls, are at home for the noon meal and special provision must be made for them, as well as for the older and the younger members of the family. Not all foods that are suited to adults may be used by children.

3. Food should be suited to those who are to eat it.

Do you know what kinds of food school boys and girls need? Have you ever wondered whether the kind of food we eat makes any difference to our bodies? Most of us eat because we are hungry or because the food tastes good, without really giving the question further thought.

4. Boys and girls need the right kind of food.

It is well not to think too much about our food, but the person who provides it and prepares it must know that she is supplying the right kind. So if you girls are going to learn to prepare meals you must be able to choose the foods that are needed by those who are going to eat the meals. Boys and girls who run and play and work need food that will give them strength or power to do this. The kinds of foods that give strength and energy are sometimes called *fuel foods*. Just as the chauffeur puts gasoline into the engine of the automobile to make it go so we need certain kinds of food or fuel to "make us go." Children need a lot of fuel because they burn it up quickly when they are well and active.

a. Food that gives strength for work and play.

Some of the common fuel foods from which we may choose are as follows :

1. <i>Starchy foods</i>		2. <i>Sugars</i>	3. <i>Fats</i>
Cornmeal	Potatoes	Sugar	Butter
Hominy	Macaroni	Sirups	Cream
Oatmeal	Spaghetti	Dates	Bacon
Rice	Dried beans	Raisins	Fat in meats
Bread	Dried peas	Candy	Nut butters
Bananas			

In addition to fuel foods the body needs food to make it grow and to repair the parts that wear out. What makes you taller and heavier than you were a year ago? The food that you ate. Many children are not as tall or as heavy as they should be because they have not eaten as much of the right kind of food as they should. Are you of the right weight for your age and height? Look at the table (pages 60 and 61) and find out.

b. Foods that build and repair the body.

Foods that are richest in protein, or foods that make us grow and repair the worn-out parts, are milk, cheese, eggs, meat, fish, nuts, beans, peas, and cereals (Fig. 38).



FIG. 38. — Foods that build and repair the body.

Other foods contain protein, too, but these have the greatest amount.

When you canned fruits and vegetables you learned that they contained mineral matter, which is very

HEIGHT and WEIGHT TABLE for GIRLS														
Height, Inches	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs	12 Yrs	13 Yrs	14 Yrs	15, Yrs	16 Yrs	17 Yrs	18 Yrs
39	34	35	36											
40	36	37	38											
41	38	39	40											
42	40	41	42	43										
43	42	42	43	44										
44	44	45	45	46										
45	46	47	47	48	49									
46	48	48	49	50	51									
47	49	50	51	52		53								
48	51	52	53	54	55	56								
49	53	54	55	56			57	58						
50		56	57	58	59	60	61							
51		59	60	61	62	63	64	65	66	67				
52			62	63	64	65	66	67	68	69	70			
53				66	67	68	68	69	70	71	72	73		
54				68	69	70	71	72	73	74	75	76		
55					76	77	78	79	80	81				
56														
57														
58												86		
59												91		
60												95	96	98
61												100	102	104
62												104	106	108
63												109	111	111
64												111	113	114
65												111	115	117
66												113	117	118
67												115	117	118
68												117	119	121
69												119	120	121
70												120	122	122
71												122	123	124
72												123	124	125
												124	126	127
												126	127	128
												127	128	129
												128	129	130
												129	130	131
												130	132	133
												131	133	134
												132	134	135
												133	135	136
												134	136	137
												135	138	139
												136	139	140
												138	140	141
												140	142	143
												142	144	144
												144	147	148
												145	147	149



PREPARED BY DR. THOMAS D. WOOD

About What a GIRL Should Gain Each Month

AGE	AGE
5 to 8.....	6 oz.
8 to 11.....	8 oz.
11 to 14.....	12 oz.
14 to 16.....	8 oz.
16 to 18.....	4 oz.

Try and do as much better than the average as you can

Weights and measures should be taken without shoes and in only the usual indoor clothes.

necessary to the body. The mineral matter and vegetable acids keep the body in good condition, and they are also necessary as building and repair materials.

c. Regulat-
ing foods.

HEIGHT and WEIGHT TABLE for BOYS

Height Inches	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs	12 Yrs	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs
39	35	36	37											
40	37	38	39											
41	39	40	41											
42	41	42	43	44										
43	43	44	45	46										
44	45	46	46	47										
45	47	47	48	48	49									
46	48	49	50	50	51									
47	51	52	52	53	54									
48	53	54	55	55	56	57								
49	55	56	57	58	58	59								
50	58	59	60	60	61	62	63	64	62					
51	60	61	62	63	64	65	66	67	68					
52	62	63	64	65	67	68	69	70	71					
53	66	67	68	69	70	71	72	73	74	71				
54	69	70	71	72	73	74	75	76	77	78				
55	73	74	75	76	77	78	79	80	81	82				
56	77	78	79	80	81	82	83	84	85	86	86			
57	81	82	83	84	85	86	87	88	89	90	91			
58	84	85	86	87	88	89	90	91	92	93	94	97		
59	87	88	89	90	91	92	93	94	95	97	99	101	102	
60	91	92	93	94	95	97	99	102	104	106	108	108	110	
61	95	97	99	102	104	106	108	110	111	111	112	113	116	
62	100	102	104	106	108	110	111	114	115	115	117	119	119	
63	105	107	109	111	114	115	117	119	120	120	122	125	126	
64	113	115	117	118	119	120	122	123	124	125	126	126	126	
65	120	122	123	124	125	126	127	128	129	130	130	130	130	
66	125	126	127	128	129	130	131	132	133	134	135	135	135	
67	130	131	132	133	134	135	136	137	138	139	140	141	142	
68	134	135	136	137	138	139	140	141	142	143	144	145	146	
69	138	139	140	141	142	143	144	145	146	147	148	149	150	
70	142	144	145	146	147	148	149	150	151	152	153	154	155	
71	147	149	150	151	152	153	154	155	156	157	158	159	160	
72	152	154	155	156	157	158	159	160	161	162	163	164	165	
73	157	159	160	161	162	163	164	165	166	167	168	169	170	
74	162	164	165	166	167	168	169	170	171	172	173	174	175	
75	169	170	171	172	173	174	175	176	177	178	179	180	181	
76	174	175	176	177	178	179	180	181	182	183	184	185	186	



PREPARED BY DR. THOMAS D. WOOD

About What a BOY Should Gain Each Month

AGE	5 to 8	6 os.	AGE	12 to 16	16 os.
	8 to 12	8 os.		16 to 18	8 os.

Water is also a very important regulating material. It is well for everyone to drink a glass in the morning before breakfast, one before each meal, one between meals, and one before going to bed.

A third kind of regulating food is found in the coarse fiber of certain foods, and everyone except babies and



FIG. 39.—“Fruit and green vegetables and one quart of milk daily should be insisted upon.”

very young children should have some of this “bulk or ballast” in the diet. By eating vegetables such as celery, spinach, cabbage, lettuce, carrots, turnips, tomatoes, onions, and all kinds of fruits this kind of material is provided.

It is not sufficient to know what certain foods are good for ; we must know what selections to make from the lists and until we have more experience it may be well to take suggestions from those who have made a great study of the proper choice of foods for all kinds and classes of people.

Dr. Eugene Lyman Fisk, Medical Director of the Life Extension Institute, says “children need plenty of fuel foods, cereals, bread and butter, milk, cheese, eggs

d. Proper choice of food necessary.

in moderation, but not a large amount of meat, certainly not more than once-daily. . . . Fruit and green vegetables and a quart of milk daily should be insisted upon" (Fig. 39).

It is very important that all of our boys and girls eat good wholesome food to keep them well, for the world needs strong, well people to do the work. It is not only necessary to know what foods to provide, but it is necessary to know how to cook them to make them most palatable and digestible. Every girl should take pride in being able to provide and cook an appetizing, nourishing meal.

5. Well-cooked food necessary at every meal.

It is also worth while to know how to serve a meal in an attractive way, for the pleasure that attractive service gives adds not only to life's enjoyment but to the digestibility of the meal as well.

6. Attractive service essential.

When it came to deciding what the girls would like to learn to cook they thought of the dishes that seemed simple and easily made and, too, those that would not cost too much, and after some discussion planned the several lessons that follow. Some of the class wanted to learn to make desserts first, but others thought they might be too hard, so Miss Ashley suggested that she choose the lessons for the various days.

7. Suitable luncheon dishes.

Some of the girls who attend the Ellen H. Richards School do not go home for luncheon, but have money

with which to buy food at noon. What do they buy? Where do they buy it? Where do they eat it? Miss

Ashley very often took her lunch at the cafeteria in the school or at some other place in the neighborhood, and became interested in what the girls bought and ate. When the girls began to study about suitable foods for schoolgirls they became interested in making good selections, for it had not occurred to most of them before that it made any difference what one ate.

Those who stayed for lunch planned among themselves to see who could get the most nourishing food for the least money and yet have all the kinds of foods the body needed. They asked Miss Ashley to go to the cafeteria with them and they talked over the value of the food together. Several times they brought menu cards into the classroom and compared the different dishes that the girls pretended to choose for luncheon.

SUGGESTIONS FOR REVIEW

1. What are some of the things one must think about when planning luncheons for the family?
2. What do you understand by the phrase "fuel foods"?
3. Make a list of fuel foods from memory.
4. Name the building and repair foods that you ate at home yesterday.
5. What regulating foods did you have in this morning's breakfast?

6. What influences you most when choosing your lunch at the school cafeteria?

7. Do you think that your choices are always wise? What makes you think so?

LESSON 6

THE MOST IMPORTANT FOOD FOR CHILDREN

Learning about the value of milk and how to use it in the diet.

“A quart of milk a day for each member of the family under sixteen and a pint apiece for each person over this age’ (Fig. 40). That is what I read in a book called *Everyday Foods in War Time*¹ that Mrs.



FIG. 40. — The daily milk supply for the Edwards family.

Edwards let me take.” Constance Moore had become very much interested in reading all she could about subjects she was studying at school and when Miss Ashley told them about the first chapter in the book alluded to above Constance borrowed it and read the first chapter, which was entitled “The Milk Pitcher in the Home.” Get the book and read it for yourself.

¹ *Everyday Foods in War Time*. Dr. Mary Schwartz Rose. Macmillan.

“Why does anyone want us to use a quart of milk each day?” asked Edith. “We should use it because

I. Why milk is such a good food.

milk contains nearly everything that the body needs, and if the other foods we eat do not happen to supply what we should have, milk, of all foods, will come nearest to doing it. You remember that we learned the other day that we need certain foods to make us grow. Milk contains something that will make us grow.

1. Milk makes you grow.

Think of the way little babies grow, and they have nothing but milk. Think of the little calves, and colts, and pigs, too!”

Foods that make us grow are called *proteins*, and the particular protein in milk is called *casein*. The curd that separates out when milk sours is the casein.

Miss Ashley added a little vinegar to a glass about half full of milk and showed the girls the curd or casein. “Mother makes cottage cheese out of sour milk when we are in the country,” added Dorothy; “and at the cheese factory they use the curd to make the good yellow cheese that we buy at the store.”

Someone read the other day that children need good fuel foods to give them strength to work and play.

2. Milk is a good fuel food, too.

Milk provides this kind of food, too. The cream or fat in the milk and the sugar provide the body with power to work. The sugar in milk gives it its sweetish taste, and the cream makes it good and rich. It is still a good food when the cream is removed, but there is not so much fuel.

Another thing that makes milk so valuable for growing children is the *lime* that it contains. The body needs lime to help build it or to make it grow; it is needed to make good strong bones and teeth, and children, especially, should be supplied with an adequate amount. There is not enough lime in bread and meat and candy and the usual foods eaten, and unless milk is used there is danger of not getting enough.

3. The mineral matter in milk is important.



FIG. 41. — One of these rats was fed on milk; the other had none. Can you tell which had milk?

Lime is also necessary as a regulating material and is needed to keep one healthy. There are still other things in milk that the body needs if it is to grow as it should; they are called *vitamines*. When you are older you may learn more about the composition and value of milk.

4. Other constituents in milk.

The accompanying pictures show the difference in growth in rats that had had different diets (Fig. 41). One had milk, the other had none. Can you tell which had milk?

Not everyone cares to use milk as a beverage, so it is well to know a variety of ways to serve it. Nearly

all children enjoy drinking milk, and a glass should be provided for each meal. They should be taught to drink it slowly. It is well to eat something with it, such as bread or cereal.

II. How milk may be used.

When plain milk is not desired a cup of cocoa made of

1. As a beverage.

milk may take its place. Most boys and girls like the flavor of cocoa and of chocolate.

Many people who do not care to drink it as a beverage find it palatable when used with a cereal. Whole milk

2. On cereal.

or even skim milk is very wholesome with the oatmeal in the morning and helps to make a

good breakfast. It is good poured over toast, too.

Many mothers make good milk soups by thickening the milk and adding vegetables of some kind, such as tomatoes, potatoes, spinach, celery, and other

3. In soups.

vegetables. A good bowl of "cream soup"

is a meal in itself. Others make cream sauces and add vegetables, or meat, or eggs. Nearly every-

4. Cream sauces.

one likes these and they make good luncheon or dinner dishes.

Then there are also many ways of combining milk with other foods, as in puddings, cakes, and ice cream.

5. In other dishes.

It is not difficult to use a great deal of milk when one realizes how important it is as a

food. Many people think that they cannot use milk because it costs too much. It does cost more

III. The cost of milk.

than it used to, but so does everything else.

It would not seem to cost so much if it were used *instead* of other things, not in *addition* to them.

Milk may take the place of meat in the meal and does not cost as much. One and one fourth cups of milk will take the place of two ounces of lean beef as building material and is better for the children. Find out the price of milk and of beef in your town and see which is the more expensive building material.



FIG. 42. — The milk bottle should be kept covered.

There are many very important things to know about milk, but nothing is more important than to know how to care for it in the home. Because it is such a perfect food it is a very good place for germs to grow.

Be sure to wash the bottle before pouring out any milk. Get into the habit of doing

1. Wash the bottle before pouring out milk.

this. You do not know what kind of dirt may have come in contact with the bottle after the milk was put into it.

If milk is left in the bottle replace the cap or, better, provide a clean one. A cup or a glass may be inverted over the bottle (Fig. 42). Do not pour the milk into another utensil unless necessary. If necessary, be sure that the container is absolutely clean. Milk very readily absorbs the odors and flavors

2. Keep milk covered.

of other food in the refrigerator, and this is another good reason for covering it. Sometimes milk is not delivered in bottles but is dipped from a can and poured into pans or pails. Be sure that the pans are scalded and kept covered until the milk is delivered. Do not put milk tickets into them, nor

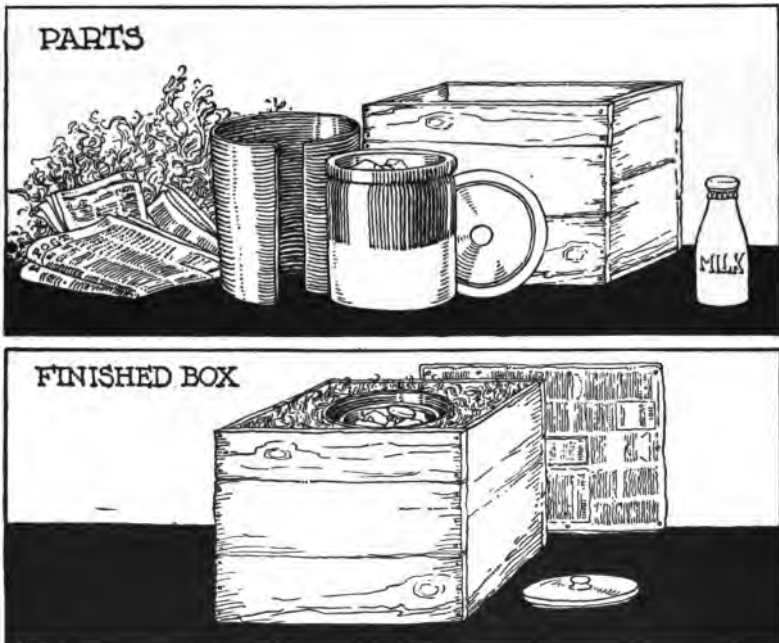


FIG. 43. — Milk may be kept in a home-made cooler

leave them uncovered on the doorstep. If milk is bought at the grocery store one should not walk through the streets with the pail uncovered.

As soon as the milk is delivered the bottle should

be washed and put into the refrigerator. If allowed to stand in a warm room it sours very quickly. The accompanying picture shows how milk may be kept sweet when one has no refrigerator (Fig. 43). Study the various parts and see if you can understand how they are put together. The bottle of milk is placed in the earthen jar with the ice.

4. Milk should be kept cold.

All milk containers should be rinsed with cold water as soon as empty. They should then be washed with clean, soapy water and rinsed with scalding water. In the summer time it is a good plan to boil the pans and pails in soda water for fifteen minutes.

v. The care of milk containers.

Every girl enjoys making a good dessert. Junket is not only palatable and nourishing but is easy to make.

vi. Making junket.

RECIPE FOR JUNKET

1 quart milk

1 teaspoonful vanilla

$\frac{1}{2}$ cup sugar

A few gratings of nutmeg

1 rennet or junket tablet

Warm the milk slightly. It should be merely lukewarm. Stir in the sugar and flavoring. Dissolve the rennet in a little water and stir it into the milk. Pour the mixture into individual serving dishes and let it stand until firm.

Junket is good when served with a spoonful of jelly or jam on top (Fig. 44). Sometimes chopped nuts, whipped cream, or stewed or fresh fruit are added. Maple sugar gives it a pleasant flavor.

Working in groups of two the girls made only one

fourth of the recipe and left their dishes in the refrigerator to get firm. They came back next day to see and to taste the junket.

They were very much interested to know that rennet or junket tablets are made of something taken from the



FIG. 44.—A dish of junket with whipped cream and fruit for dessert. A good way to use milk.

inside of calves' stomachs and that when milk enters the human stomach it forms into curds or clots just as the milk did when rennet was added to it and it was allowed to stand. When Marjorie looked at her junket the next day she was surprised to find that it was not firm. It seems that she had boiled the milk she used, and

Miss Ashley said that that was the reason why it did not clot.

Cocoa is a favorite drink with many people, especially with boys and girls, and everyone should know how to make it. It is a good beverage for any meal

VII. Making cocoa.

1. Many ways of making.

but is most frequently used for breakfast and for luncheon. It can be made in a great variety of ways and its food value may be changed accordingly. A cup of cocoa made with whole milk is more nourishing than one made of skim milk; the one made with skim milk is more nour-

ishing than the one made of water. The addition of sugar and cream makes cocoa still more nourishing.

The following recipe may be modified in a variety of ways according to the materials at hand. Maybe your teacher will let you modify it in some way.

COCOA

1 pint milk
1 pint water
8 teaspoonfuls cocoa
8 teaspoonfuls sugar
A few grains of salt

Mix the cocoa, sugar, and salt in the upper part of a double boiler. Add the hot water and boil for a few minutes, then add the milk and let the mixture heat over the boiling water. Beat well with an egg beater to prevent a scum from forming. This amount should make six servings.

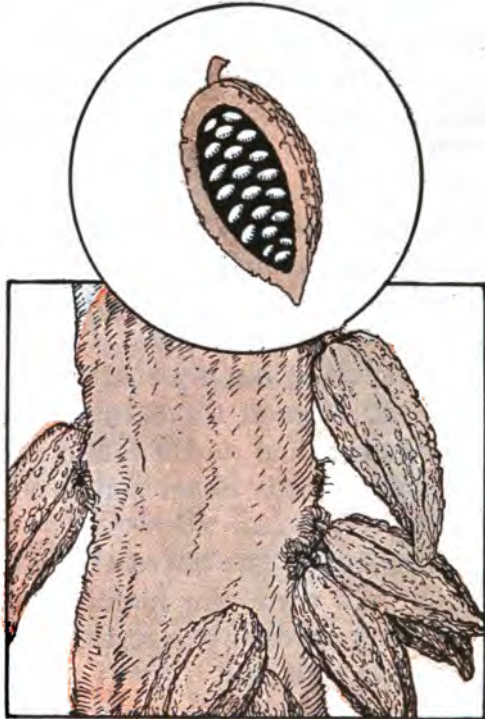


FIG. 45. — Cocoa is made from the beans of the cacao tree.

The dry cocoa from which the drink is made comes from the beans of the cacao tree, which grows in the tropics (Fig. 45). The beans are about the size of

almonds and have to be fermented and roasted and treated in other ways in order to make cocoa. Cocoa is really chocolate with the fat removed.

Miss Ashley suggested that the girls make junket and cocoa the following Saturday. She cautioned them again about soiling more dishes than were necessary. She said also that by planning just how to make the article one should be able to use the fewest possible utensils. She told the girls that they should get the materials needed from the pantry and should not ask their mothers to wait on them, and that they should leave no soiled dishes in the sink for someone else to wash.

At the next lesson period six girls reported that they had made junket for Saturday night's dinner; three families had had junket Sunday noon; and eight girls had made cocoa either for Saturday luncheon or for Sunday night tea.

Miss Ashley also asked the girls to find out just how much milk their own families should take to provide one quart for each person under sixteen and a pint for each over that age.

SUGGESTIONS FOR REVIEW

1. Why is milk such an important food? Tell what it contains.
2. Plan how you can use one quart each day.
3. How should milk be cared for in the home?

4. Tell how to wash milk containers.
5. How can you change the cocoa recipe to give it greater food value?

LESSON 7

THE MAIN DISH AT LUNCHEON

The girls thought that they should learn how to prepare a substantial dish first, since perhaps this was most essential. They sometimes called the luncheon at which these dishes were served their "one-dish" meals. After reading the lesson see whether you can tell why.

To simplify the preparation of the home luncheon we frequently prepare but one main dish and follow it with a salad or a dessert. By combining several food materials in one dish, fuel, time, and energy may be saved. A housekeeper must continually think about saving her own time and energy as well as about economizing on other things.

If only one main dish is to be served it is essential to include in it the kinds of foods the body needs and to make it just as palatable and attractive as possible to all who are to eat it.

Soups are good main dishes for luncheons for many reasons: they are easily made; they may be made very nourishing by using suitable materials; they are economical because the small portions of food left over from other meals may be used; they may be made very palatable and attractive; and it is not at all difficult to put into them the different food materials that the body requires.

I. Nour-
ishing
soups.

Cream soups are not made of cream, but of milk which has been slightly thickened to make it look

like cream and to which either vegetables or fish have been added. A very great variety of cream soups is possible, and in general they are made in about the same way (Fig. 47).

Sometimes the milk is thickened first and then the vegetables are strained and added, and at other times the thickening is added last. It is well to know how

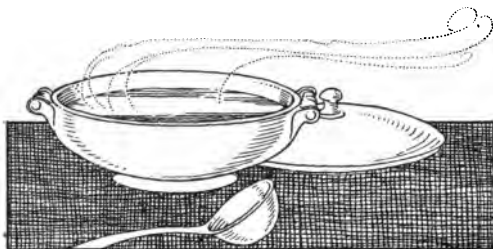


FIG. 46. — A bowl of good cream soup is a meal in itself.

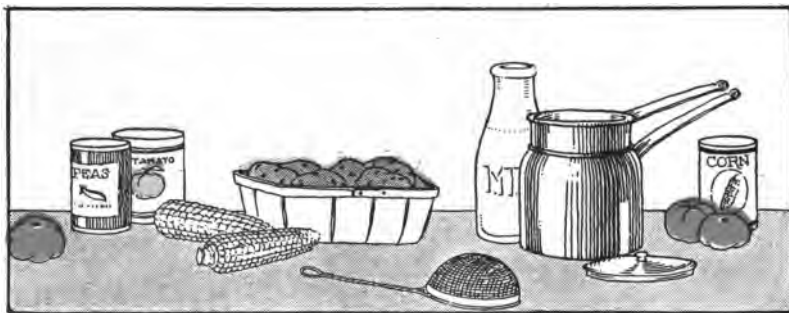


FIG. 47. — A great variety of cream soups is possible.

to make a good thin *cream sauce* or *white sauce* as a foundation for cream soups. This is one way to make it:

THIN WHITE SAUCE

1 cup hot milk	1 tablespoonful flour
1 tablespoonful butter or other fat	$\frac{1}{2}$ teaspoonful salt
A little pepper	

Put the butter into the upper part of the double boiler; when melted add the flour and seasoning and stir until blended; add one third of the milk, stirring until smooth and well mixed; add the rest of the milk, stirring continually so it will be smooth, cook over the fire for a minute or two, then set into the lower part of the double boiler to keep hot and to keep from burning.

To a sauce of this kind may be added strained vegetable pulp such as green peas, spinach, mashed potato, carrots, celery, or asparagus. If the vegetable pulp is very thin, more flour may be necessary. The soup should be tasted and more seasoning added if desired. One cup of soup should be made for each person.

Until you have made cream soups many times it will be well to follow a recipe giving definite amounts and definite directions. These are some of the soups that Miss Ashley's class made:

CREAM OF POTATO SOUP

1 quart hot milk	2 to 4 tablespoonfuls butter
1 cup mashed potato	2 teaspoonfuls salt
2 tablespoonfuls flour	A few slices of onion

The onion and potato may be cooked together and mashed as for mashed potato, or may be pressed through a sieve into the hot milk. Mix the butter and flour and add to the milk and potato mixture. Chopped parsley may be sprinkled over the top when served.

Why is less flour added in this soup than the recipe for thin white sauce calls for ?

CREAM OF TOMATO SOUP

1 pint milk	1 pint tomatoes ($\frac{1}{2}$ can)
2 tablespoonfuls flour	1 small onion
2 tablespoonfuls butter	2 teaspoonfuls sugar
1 teaspoonful salt	$\frac{1}{4}$ teaspoonful soda

Make thin white sauce of the first four ingredients. Cook the tomatoes, onion, and sugar together. Add the soda, and rub through a strainer. Combine the two hot mixtures and serve.

Why is the soda used in tomato soup ?

Why should this soup be made shortly before it is to be served ?

CREAM OF CORN SOUP

2 cups milk	1 can corn
2 tablespoonfuls butter	2 cups boiling water
2 tablespoonfuls flour	1 teaspoonful sugar
1 teaspoonful salt	1 slice onion

Put the corn through a grinder and boil with the onion and sugar in the water. Make a thin white sauce of the milk, butter, and flour. Add the seasoning. Combine the corn with the white sauce.

Other good soups are made by adding vegetables, seasonings, and thickenings to meat stock or liquor in which meat and bones have been cooked until all their flavor is in the stock. There should be a soup kettle in the kitchen of the family where much meat is used, and all bits of left-over beef, veal, or chicken, and all carcasses and bones

2. Soups
with meat
stock.

should find their way into the kettle. All soup meat and bone should be set on to cook in cold water and should *simmer* until all the flavor is extracted from the meat and bone. This may be all day. The liquor may then be strained and cooled, if the fat is to be removed. To it may be added a great variety of vegetables, noodles, macaroni, rice, and barley, according to the kind of soup desired. Cold left-over tomatoes, peas, carrots, corn, beans, and turnips are all good and give variety to the diet.

In a later lesson you will learn how to make soup stock from fresh soup meat.

The day Miss Ashley's class made cream soup they toasted crackers to serve with it. *Croutons*, bread cut into small cubes and browned in the oven, are good to serve with soup. **3. To serve with soup.**

It is well to warm the cups or bowls before pouring the soup into them, as nearly everyone enjoys hot soup.

Chowders are good luncheon dishes and after a well-made chowder is served one does not usually care for anything more, for it is a meal in itself. **II. Chowders.** Chowders differ from cream soups in that the vegetables or fish are not strained or mashed and the milk is not thickened with flour but with cracker crumbs, if at all.

Mrs. Edwards gave the girls her recipe for fish chowder and they made it at school one day. She said that fresh or canned clams, or fresh cod, halibut, or haddock could be used.

FISH CHOWDER

- 2 cups of clams or fish cut into small pieces
- 2 cups of diced or sliced potatoes
- 1 small onion
- 3 cups milk
- 4 tablespoonfuls butter or pieces of diced salt pork
- 2 teaspoonfuls salt
- 6 or more soda crackers

Try out the pork in the kettle and fry the onion in it. Cook the potatoes and fish together, drain, and put into the kettle with the pork and onion, first a layer of fish and potato, then some cracker crumbs until all are used. Add the hot milk. Serve very hot.

When clams are used Mrs. Edwards cooks the potatoes five minutes, alternates layers of potatoes and clams, simmers all together until the potatoes are done, and then adds the hot milk. She sometimes dredges the layers of potatoes and clams with a little flour to *bind* the whole together. This makes the chowder a little smoother, she says.

POTATO AND ONION CHOWDER

- 2 cups diced or sliced potatoes
- 2 small onions or 1 large one
- 2 cups milk
- 2 tablespoonfuls butter or salt pork diced
- 1 teaspoonful salt
- 4 soda crackers

Parboil the onion and potato five minutes. Drain, add salt, cover with fresh boiling water, and cook until done. Add hot

milk, butter, and cracker crumbs and more salt if necessary. This is a very plain but palatable dish.

CORN CHOWDER

1 small can corn	A small piece fat salt pork diced
2 cups diced potatoes	2 cups scalded milk
A small onion sliced	4 soda crackers
1 tablespoonful butter	

Dice the pork and fry out, add the onion and fry until brown. Parboil the potatoes for five minutes, then add to the onion and fat. Cover with water, and cook until done. Add the corn and milk and bring to the boiling point. Add the seasoning, butter, and split crackers.

Figure out how much chowder each of these recipes will make. A generous cupful should be allowed for each person. How will you change the recipe for your family?

Another good dish to serve for the home luncheon is made by alternating two or more different kinds of food in layers in a dish and baking or ^{III. Scal-}steaming it. Food prepared in this way is ^{loped} called a *scallop*. ^{dishes.}

Many very attractive and palatable combinations may be made. Ordinarily we use a starchy food such as rice, potatoes, macaroni, or bread crumbs with cheese, eggs, fish, or meat and moisten the whole with either milk, thin white sauce, or gravy of some kind. Some good combinations are rice and meat; potato and meat; rice and cheese; macaroni and cheese;

rice and tomato ; macaroni and tomato ; meat or fish and cracker crumbs. In general, any two foods that go well together may be combined in a scallop (Fig. 48).



FIG. 48. — Scalloped dishes are good for luncheon.

As a usual thing in making scallops the foods are cooked before being put in layers in the baking dish, so that all that is necessary is a thorough reheating before the meal. A

food that requires long cooking should never be put into the dish with one that needs but little cooking.

The utensil in which the scallop is cooked should be able to stand the heat of the oven without cracking. An earthenware dish is good ; so are the pyrex dishes.

Miss Roberts and Miss Ashley have individual baking dishes or ramekins which they use for scallops (Fig. 49). Individual dishes are especially nice when some members of the family may be late to meals. Do you see why ?

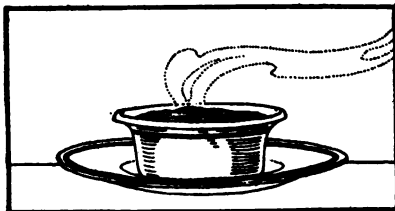


FIG. 49. — Individual ramekins are nice for scallops.

Perhaps you would like to make a scallop for your luncheon at home some Saturday. Here are some recipes. Miss Ashley always gave the girls type-written copies of all the recipes so that they could put them into their loose-leaf notebooks. She said that it was a waste of time to copy them from the board.

SCALLOPED SALMON

Remove all skins and bones from the fish. Use equal parts of fish and white sauce and an equal quantity of bread crumbs. Put the layers alternately into a buttered baking dish, with buttered crumbs on top. Bake the mixture until it is heated through and the crumbs are brown.

WHITE SAUCE

2 tablespoonfuls flour	1 cup milk
2 tablespoonfuls butter	$\frac{1}{4}$ teaspoonful salt
A speck of pepper	

Scald the milk. Melt the butter and add the flour to the melted butter, smoothing out all lumps. Add the hot milk very slowly, stirring the mixture constantly. Boil it for five minutes or until smooth and thick. Add the salt and pepper.

BUTTERED BREAD CRUMBS

Grate or crumble stale bread into fine crumbs. Allow 2 tablespoonfuls of melted butter to 1 cup of crumbs. Pour the butter over the crumbs and stir them with a fork until they are well coated with butter.

BAKED MACARONI WITH CHEESE

Butter a baking dish. Put in a layer of boiled macaroni, sprinkle with grated cheese, moisten with thin white sauce, and

repeat until the dish is filled. Cover with buttered crumbs and bake for about twenty minutes.

The macaroni should be broken into pieces about an inch long and cooked in boiling salted water for twenty minutes or until tender, then drained and cold water poured over it to keep the pieces from sticking together. Cheese does not need long cooking and should not have too great heat applied. A good method to use is to melt the cheese in the hot white sauce and pour the sauce over the macaroni in the baking dish.

SHEPHERD'S PIE

Into a baking dish put a generous layer of small pieces of meat and gravy. Spread over this a layer of well-mashed potato. Spread the top with beaten egg or with butter. Set in the oven to get hot and to brown.

If the mashed potato is left from the day before it is well to moisten it with milk or with milk and egg to make it soft and light. It will get fluffy when baked.

MEAT AND TOMATO PIE

3 cups cold meat (beef, lamb, or mutton)
1 can (3 cups) tomatoes
Flour, pepper, and salt

Grease a baking dish. Place in the bottom a layer of tomatoes, then a layer of diced meat. Dredge lightly with flour, salt, and pepper. Repeat until the dish is full, then put in an extra layer of tomatoes and cover the whole with a layer of pastry or bread or cracker crumbs. Bake from $\frac{1}{2}$ to 1 hour according to size.

SCALLOPED POTATOES WITH HAM

Pare and slice the potatoes very thin. Butter a baking dish, put in a layer of potato, dredge with flour, and season with butter, pepper, and salt. Repeat until the dish is about three fourths full.

Cover with milk. On the top place a slice of smoked ham, cut about three fourths of an inch thick. Set in the oven to bake. For the first fifteen minutes the dish should be covered. Remove the cover and cook until the potatoes are done.

SCALLOPED EGGS AND MEAT

Cook the eggs in boiling water for thirty minutes. This will make them mealy. Put a layer of buttered crumbs in a baking dish, cover with eggs, either sliced or finely chopped, moisten generously with white sauce, add a layer of chopped ham or chicken, then layers of crumbs, eggs, and meat. Have a layer of crumbs on top and bake until brown.

Ordinarily meat need not be served for luncheon, especially if it is to be served for dinner, but sometimes something else may take the place of meat at **IV. Meat** the evening meal and a meat stew may appear **Stews.** on the luncheon table. A little meat may be used to flavor many vegetables. For stews the less choice or less tender pieces of meat may be used, for they may be given long, slow cooking. Sometimes pieces of the left-over roasts may serve as the foundation for a meat stew.

MEAT STEW

- 2 or 3 pounds lean beef or neck or breast from lamb or veal.
- 2 onions
- 4 or 5 medium sized potatoes cut into fourths
- 3 or 4 carrots
- 3 or 4 turnips
- salt and pepper
- 4 tablespoonfuls flour

Wipe the meat, remove the fat, cut the meat into small serving pieces. Brown half of it in the hot fat. Put the other half into

cold water and bring slowly to the simmering point. Add the seared meat and fat. Cook slowly or simmer until the meat is almost tender. Add the carrots, turnips, and onions in time to cook tender. This will depend upon their quality. Parboil the potatoes for about five minutes and add to the stew during the last twenty minutes. Mix the flour with just enough cold water so that it will pour easily. Thicken the gravy with this mixture. Let the stew boil up well and serve.

A stew can be a very attractive dish or not, according to how the vegetables are cooked and how the whole is served (Fig. 50). It should be prepared carefully, the



FIG. 50. — A stew should be served attractively.

vegetables should retain their shape and should be nicely arranged on the serving platter. The number

of vegetables used will depend upon the family; there should be enough of each kind to serve each person at the table.

When Miss Ashley's class made a stew in school, they cut the meat and vegetables into small cubes in order that they might cook more quickly; but when Miss Ashley makes stew at home she says that she likes to see the individual pieces of each.

You will notice that in nearly all of the dishes suggested above there are fuel foods, building foods, and regulating foods. Can you tell in each recipe which foods give you strength for work, which build and re-

pair tissue, and which act as regulators? Make a list of each and ask your teacher whether you are right.

SUGGESTIONS FOR REVIEW

1. Why is a cream of potato soup nourishing?
2. Suggest several ways of using the meat and potatoes left over from Sunday's dinner.
3. In how many ways do you know how to use white sauce? Name them. What care do you exercise when making it?
4. Think of several ways by which you can save fuel and work when preparing luncheons.

LESSON 8

A LESSON ON SALADS

Refreshing salads are good luncheon dishes. Miss Ashley always liked to have salad lessons in the autumn so that the girls would know how to make them and would use them during the winter when their use in the diet is so desirable.

The table on which Miss Ashley placed the food materials that the class were to use during the day brought a great many exclamations from the girls as the clean white cover was lifted. As they stood admiringly around it they wondered what kind of luncheon dishes they would probably make. On the table were several small dishes containing peas, beans, carrots, and other vegetables which looked as though they had been left over from some other class; there was a fresh head of lettuce, a bunch of romaine, a bunch of water cress, and other things (Fig. 51).

“How can we use these vegetables for luncheon?” asked Miss Ashley. Various answers were given. Some suggested creaming the vegetables, others would make soups, others thought of scallops and stews. It was evident that the girls were thinking of the last few lessons they had had in the kitchen and Miss



FIG. 51.— Can you make a refreshing salad ?

Ashley was pleased that they could suggest good ways of using what they saw.

“There are a great many meals to plan for during the year and nearly everyone wants variety, so instead of reheating or cooking any of these vegetables let us learn to use them in another way and introduce our families to something new.” Miss Ashley went on to say that many kinds of vegetables could be used as salads and that they were especially nice to use during the winter when meals were apt to become rather monotonous. Nearly everyone uses them during the summer, but their use should be encouraged during the winter, too.

I. Use of salads.

1. Salads add variety to the diet.

In addition to giving variety, vegetable and fruit salads give valuable mineral salts to the body. It is necessary for the body to have a good supply of these during the winter. Nearly all salads are served on "salad" vegetable leaves such as lettuce, romaine, chicory, or water cress, which contain valuable mineral salts. These vegetables are called *salad* vegetables because they contain *sal*, the Latin word for *salt*.

2. Salad vegetables contain valuable mineral salts.

Many people still limit the meaning of the word salad to the fresh green leaves, which are so refreshing and appetizing, but others apply the term to any kind of fruit, vegetable, fish, meat, or fowl, to which an appropriate dressing has been added. Salads of this kind may be used for the main dish in the meal. They are usually named according to the material out of which they are made; thus we have potato salad, fruit salad, salmon salad, etc.

3. Some salads are used as the main dish of the meal.

Of course the kind of salad we serve with a meal will depend upon the rest of the meal. A few crisp leaves will serve as an appetizer and will make a plain meal more attractive, but if the salad is to be the main dish it must be made of some good nourishing food materials. When the main dish is substantial a light salad may be served. A "light" salad is one made of fruits or vegetables that contain a great deal of water. The leaves served by themselves, or garnished with

II. What kinds of salads shall be served?

1. Light salads.

something attractive, such as a little fruit or vegetable, do not contain much nutriment but are still valuable.

a. Caring
for salad
leaves.

All fresh vegetable leaves that are used for salads should be very crisp and cold. They should be very carefully washed and drained to free them from water. The draining may be done by placing them on a towel or by putting the leaves

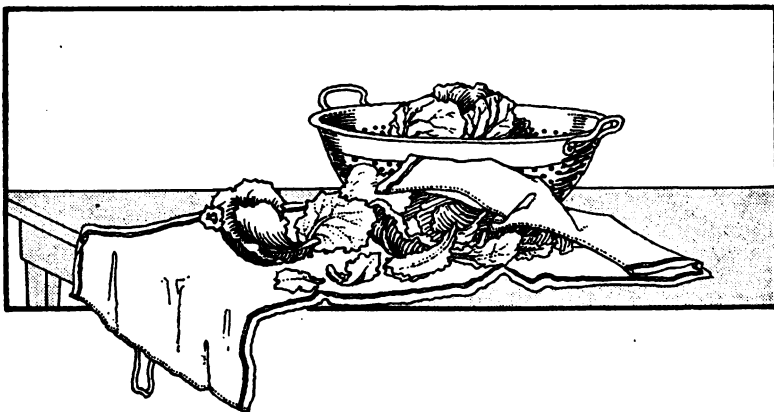


FIG. 52. — Salad leaves should be washed and dried.

into a bag made of loose material and hanging it in the refrigerator (Fig. 52). Lettuce that comes from greenhouses should be cleaned with especial care as it may have small green insects on it.

The more substantial salads made of potatoes, beans, and peas, apples and nuts, chicken and celery, and the 2. "Food" like are meals in themselves if the serving is salads. sufficiently large, and may well be used as the main dish at luncheon.

With some of the lettuce that the girls had washed and drained Miss Ashley showed them how to arrange some individual salad plates. She was careful not to take the bruised or browned leaves, for she said that they could be used for other purposes, and she was careful, too, to have the leaves free from water; neither did she allow the leaves to extend beyond the edge of the plate. The darker green leaves she placed first and the lighter ones on top. She said that sometimes when all the leaves were dark green and rather coarse she cut them into shreds with scissors and that they looked better and were easier to manage at the table.

III. Attractive arrangement of salads.

When Miss Ashley arranged the vegetables on the leaves she did not mix them all together but put spoonfuls of different ones near each other. "Miss Ashley's salads make you hungry," said Constance.

After talking about salads Miss Ashley let the girls make a French dressing and a cooked dressing. They used the French dressing on the vegetable salads they made that afternoon and kept the other for another day.

IV. Salad dressing.

FRENCH DRESSING

3 tablespoonfuls oil	$\frac{1}{4}$ teaspoonful salt
1 tablespoonful vinegar	a little paprika
$\frac{1}{2}$ teaspoonful sugar	

Put all the materials into a bottle and shake hard until well mixed and creamy. Pour over the salad.

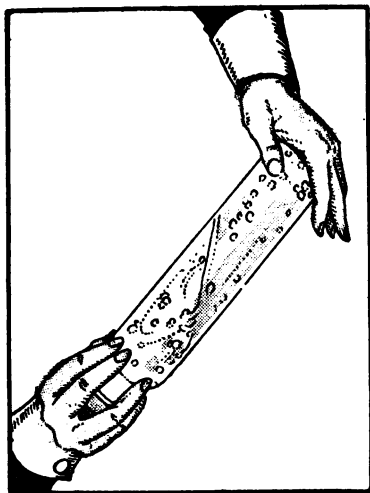


FIG. 53.— A convenient way of making French dressing.

Miss Ashley said that she kept a bottle with a good cork and used it for making French dressing. One may make the dressing in a bowl by simply stirring the mixture well.

COOKED SALAD DRESSING

$\frac{1}{2}$ tablespoonful salt	1 tablespoonful butter
$1\frac{1}{2}$ tablespoonfuls sugar	Yolks of 2 eggs
$\frac{1}{2}$ tablespoonful flour	$\frac{3}{4}$ cup milk
1 teaspoonful mustard	$\frac{1}{2}$ cup vinegar

A little paprika

Mix the dry ingredients with the butter in the upper part of the double boiler. When well blended add the milk. When hot pour the milk mixture over the beaten egg yolks. Return to the double boiler and cook until creamy. Add the vinegar and beat well. Remove from the fire and allow to cool.

**V. Salads
you can
prepare.**

Nearly every girl likes to prepare a salad for luncheon. Here are some that you can easily make at home.

ROMAINE SALAD

Pick over the romaine carefully, breaking it from the stalk and discarding any unsightly leaves. Let it lie in cold water a full hour. Wash it thoroughly in cold water and dry it in a towel, being careful not to crush it. Put it in a thin cloth and place it on ice.

Place several leaves attractively on a salad plate, breaking the larger ones if desired. Over this pour French dressing.

ASPARAGUS SALAD

Arrange cooked asparagus on crisp lettuce leaves. Garnish with hard-cooked egg cut into quarters lengthwise, and serve with French dressing.

CUCUMBER AND TOMATO SALAD

1. Choose firm, fresh cucumbers and tomatoes. Peel and slice the cucumbers, dropping the slices into ice water. Peel the tomatoes and cut into halves crosswise. Arrange the tomatoes and cucumbers on a bed of fresh lettuce and serve with French or boiled dressing. If desired, thinly sliced onions may be added.

2. Peel and chill medium sized tomatoes. Cut a slice from the top of each and remove some of the pulp. Sprinkle the inside with salt and turn upside down

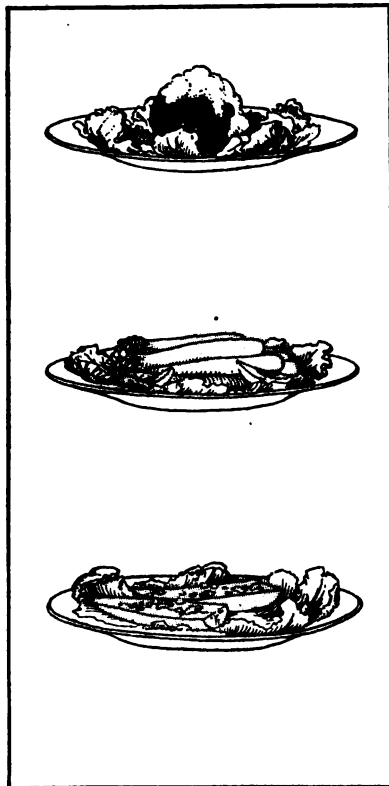


FIG. 54. — Salads you may prepare.

to drain for a half hour. Fill the centers with cucumbers cut into small dice and mixed with boiled dressing. Place on a lettuce leaf. Serve one tomato to each person.

POTATO SALAD

Cut cold boiled potatoes into thin slices or half-inch cubes. Moisten with French dressing and let stand a half hour or longer. Add chopped parsley and a little finely chopped onion. Arrange on a bed of lettuce leaves in a shallow dish. Garnish with slices of hard-cooked egg.

For variety diced cucumbers or celery cut into small pieces may be added.

BANANA SALAD

Remove the banana skin. Cut into halves lengthwise and again crosswise. Roll the pieces in chopped nuts. Serve on lettuce with a spoonful of boiled dressing.

MIXED FRUIT SALAD

Remove the skin from one banana and cut into half-inch cubes. Peel two oranges, free from the white skin, and cut into pieces. Wash and remove the seeds from a quarter pound of white grapes and cut into halves. Break English walnut meats into small pieces. Mix all together lightly. Arrange individual salads on lettuce leaves and serve either with French or boiled dressing.

SUGGESTIONS FOR STUDY AND REVIEW

1. Recall the vegetables that Miss Ashley had on the table. See whether you can arrange three or four different salads using these materials.
2. What reasons can you give for using salads?
3. How should lettuce be cared for when it comes from the market?
4. What care should be taken in making and arranging salads?

LESSON 9

QUICK BREADS

Quick breads seem to find favor in nearly every family. They offer variety in the diet and in some form are enjoyed by most people. They are so easily made that they appear very frequently on the breakfast or luncheon table.

This lesson tells how the Sunnysiders made baking powder biscuit and tells also some of the other things that they learned while making them.

How clean the caps and aprons were; how carefully the hair was tucked away under the caps; and how thoroughly the hands were washed and the nails cleaned! For were not the Sunnysiders going to make baking powder biscuit! The preparation of all kinds of food demands a clean worker, and immaculate hands are necessary when they are to come in such close contact with the food as is necessary when handling the dough in the making of bread or biscuit. Since beginning work in the school kitchen the girls had become much more careful of the condition of their hands and found that constant care made a difference in the appearance of skin and nails.

The attention of Miss Ashley's classes was always being directed to various kinds of housekeeping problems in addition to the preparation of food. This time the girls were to plan especially how to save steps and how to use the fewest possible dishes in the cooking lesson (Fig. 55). Miss Ashley felt that this was important both at home

I. Preliminary preparations.

1. Personal cleanliness again emphasized.

2. Planning to save steps and dishes.



FIG. 55.— Have everything at hand before you begin to work.

and at school. It was fun to watch the girls work. Not very many of them made more than one trip to the supply cabinet. They tried to take with them the utensils needed for measuring and measured the dry ingredients first, putting them into the sifters, which they placed in their mixing bowls. They measured the milk and butter last. It wasn't at all necessary to go first to one cupboard and



FIG. 56.— Miss Ashley taught the girls to measure carefully.

then another, and to a third, for all of the things that were most frequently needed were grouped together and one trip was sufficient.

“My mother doesn’t measure everything so carefully,” said Marjorie when she took more milk than

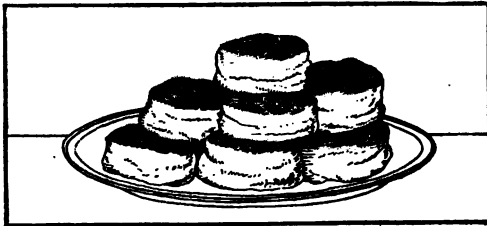


FIG. 57. — Can you make biscuits like Natalie’s?

the recipe **3. Care in measuring.** called for.

“She may not measure carefully with a spoon and measuring cup, but she probably has measured things so often that she

uses her eye and her judgment,” suggested Miss Ashley. One may become very skillful in measuring after many experiences, but it is well, while *learning* to do things, to be rather careful if good results are desired (Fig. 56).

The girls made biscuits (Fig. 57) using **II. Making the biscuits.** half of the following recipe :

BAKING POWDER BISCUIT

- 2 cups flour
- 4 teaspoonfuls baking powder
- 1 teaspoonful salt
- 2 tablespoonfuls butter (or other shortening)
- $\frac{3}{4}$ to 1 cup of milk (or milk and water)

Sift the flour, baking powder, and salt together; cut in the butter with a fork until the mixture looks like meal. Add the liquid and mix with the flour, using a fork or spatula for the pur-

pose. When a soft dough is formed, toss on to a clean baking board slightly floured. Knead slightly, pat to a thickness of about three fourths of an inch, and cut with small cutter, first dipped in flour. Bake in a pan in a hot oven for about fifteen minutes.

When the biscuits were taken from the oven they were twice as high as when they were put in and as each girl broke one apart she noticed that it was full of very tiny holes. What makes the biscuit light? In answer to the question Miss Ashley dissolved a half teaspoonful of baking powder in two tablespoonfuls of water and heated it in a test tube. How it bubbled!

III. What makes the biscuit light?

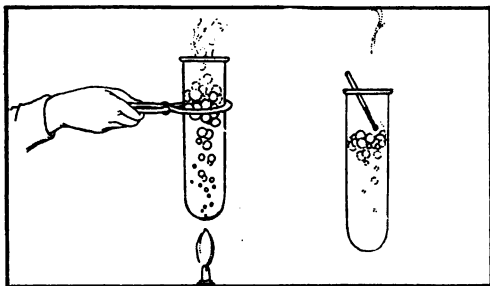


FIG. 58. — Finding out what makes the biscuit light.

She held a lighted match in the mouth of the tube and it went out (Fig. 58). "That is just what happened in our science class when we made carbon dioxide," said Margaret. Miss Ashley explained

that when baking powder is dissolved, carbon dioxide, a gas, is given off, and that in the dough mixture the little bubbles are caught and baked in, thus making the biscuit light.

Heat causes the gas to form quickly, making the dough rise. The oven must be just right to set the

dough before the bubbles burst and allow the gas to escape. If the dough is baked too quickly the gas will not be allowed to expand and the biscuit will not be light. The biscuit seem better when the bubbles are small and evenly distributed.

This interested the girls very much and one of them, who had not seen the reason for sifting the baking powder with the flour, thought it a rather good idea now. They understood better than ever before the reason

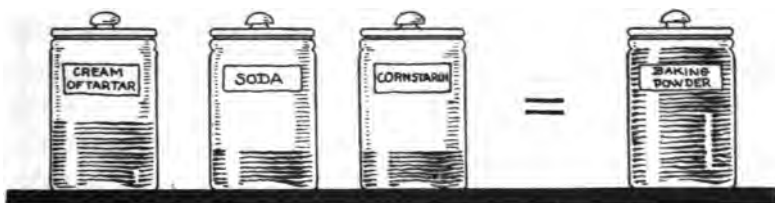


FIG. 59. — What is baking powder?

for keeping the cover on the baking powder can. Do you understand why?

The girls were not satisfied to know only what baking powder did; they wanted to know what it was and where it came from. Miss Ashley explained that it is a mixture of two parts of cream of tartar to one part of soda and one part of cornstarch (Fig. 59). The cream of tartar is obtained from argol, the crystals found on the inside of wine casks. It is an acid and when mixed with soda and moistened, carbon dioxide gas is liberated. The cornstarch is added to keep the mixture dry.

IV. What is baking powder?

Mrs. Edwards had told Constance that she used to make her own baking powder by mixing one part "saleratus" with two parts cream of tartar and that in former times when she did not have cream of tartar she made her biscuit or muffins and other quick breads light by using sour milk and soda. Sour milk contains an acid and when soda is added carbon dioxide gas is given off just as when cream of tartar and soda are moistened. Mrs. Edwards said that one had to be very careful not to use too much soda, since that made the dough yellow and bitter. Since baking powder is so easily obtained she prefers to use only enough soda to neutralize the sour milk. However, this is not sufficient to make the biscuit as light as she likes, so she adds baking powder for the leavening agent. A half teaspoonful of soda is enough to neutralize one cup of sour milk, but this gives off only as much gas as two teaspoonfuls of baking powder. If you were going to make biscuit, using the above recipe and substituting sour milk for sweet, how much soda would you use? How much baking powder would you add?

Each girl had made a half dozen or more biscuit and at the close of the lesson had eaten but one. Miss Ashley asked them to wrap the others up nicely and take them home for the evening meal, or for breakfast. Cold biscuits are good, but it is a very simple thing to reheat them, and hot ones are usually preferable to cold. One of the girls

V. Soda
and sour
milk.

VI.
Warming
over
biscuits.

said that her mother reheated them by brushing the tops lightly with water and putting them into the hot oven in a covered pan. She insisted that they were just as good as fresh ones and, so her mother thought; even more digestible.

Natalie said that her mother usually split the left-over biscuit and toasted them.

When the class met next time Dorothy Vincent was eager to tell what she had done with her biscuits. At last

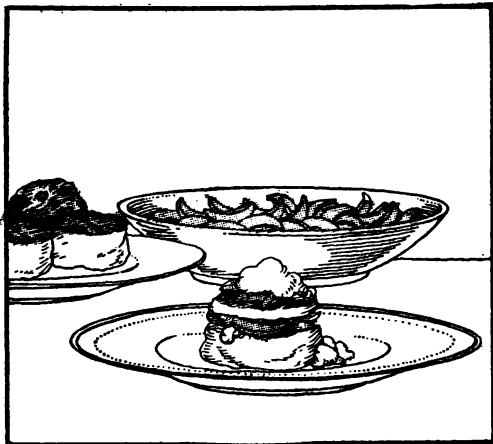


FIG. 60. — Biscuit dough is often used for making shortcake.

her father VII.
had had Simple
his wish! desserts
Do you from bis-
remember what it cuit dough.
was? Mrs. Vin-
cent had not pre-
pared a dessert for
dinner so she and
Dorothy heated
the biscuit as was
suggested above,
put some canned
peaches between
the buttered

halves and on top, and served a delicious peach shortcake (Fig. 60).

Mrs. Vincent often made shortcake by using either fresh or stewed fruits. Sometimes she added a little sugar to the dough, sometimes made it a little shorter,

and occasionally added an egg, merely to vary it. What does it mean to make biscuit dough shorter?

In the springtime, when strawberries are not too expensive, they are a favorite fruit for shortcake, but in the winter the good canned peaches, apricots, and berries taste good. Oranges also make good filling for shortcake. They should be sliced, all white skin and seeds removed, and cut into small pieces. If

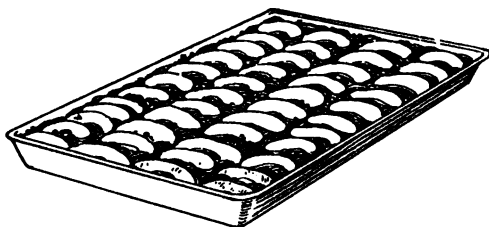


FIG. 61. — Dutch apple cake may be made out of biscuit dough.

they are prepared ahead of time and sugared the rich juice makes a nice sauce. The juice of any fruit used makes a good sauce. If one lives

where milk and cream are plentiful they may be served with any of the fruits that are not too acid.

Constance Moore said that her mother made a dessert called *Dutch apple cake* out of biscuit dough (Fig. 61). Her mother rolled the dough out to about one half inch in thickness, put it into a pan, and then pressed slices of apples into the dough in parallel rows. Over the top she sprinkled sugar and cinnamon and little pieces of butter. Constance said that she usually washed, peeled, cored, and sliced the apples while her mother made the dough, and then pressed the slices into the dough. Next time, her mother said, Constance could do it all by herself. During the

peach season Mrs. Moore frequently served peach cake which she made in the same way as the Dutch apple cake, using peaches instead of apples. She liked best to serve this with rich milk or cream.

After making biscuit at school the girls were expected to make them at home and to report their success to the class. Miss Ashley also asked them to make other quick breads at home, using their mother's favorite recipe, and to donate the recipe to the class box. Various ones were brought and were used at school, as the girls prepared some of the meals in the apartment later.

Edith Potter one morning told of her first experience in making biscuit. She said that she measured the milk too generously and that the dough was too soft. Her mother suggested

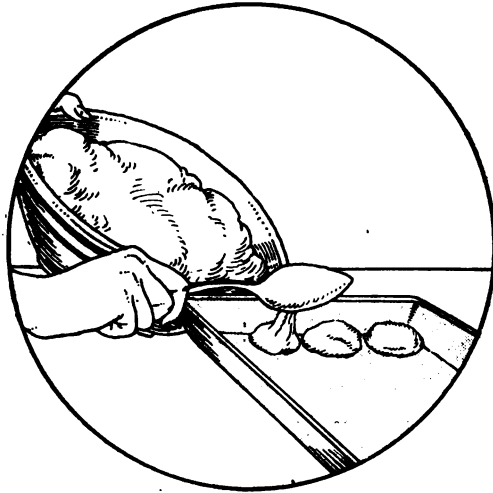


FIG. 62. — Edith Potter made emergency biscuit.

that she drop the dough from the spoon instead of adding more flour and trying to shape it (Fig. 62). It was a quick way of getting biscuits into the oven and she had no baking board to clean. Mrs. Potter said

VIII.
Home
work.

that biscuit made in this way were called *emergency biscuit* and that she often made them, especially when she was in a hurry.

Among the recipes used at home by the girls and donated by their mothers are those that follow. The girls used them later in the year when they prepared meals. Only those that they found to be good were kept in the box.

IX. Recipes sent in by the mothers.

CORN BREAD

1 cup cornmeal	1½ teaspoonfuls baking powder
1 cup sour milk	½ teaspoonful salt
2 tablespoonfuls sugar	1 egg
½ teaspoonful soda	2 tablespoonfuls melted fat

Mix dry ingredients, add milk and egg; then the melted fat. Bake in a greased pan in a very hot oven.

EGGLESS CORN MUFFINS

1 cup cornmeal	2 teaspoonfuls baking powder
½ cup flour	¼ cup sugar
1 teaspoonful salt	1 cup milk
2 tablespoonfuls melted fat	

Mix the dry ingredients; add the milk; then add the melted fat. Bake in greased muffin tins in a moderate oven for thirty minutes.

MUFFINS

2 cups flour	1 cup milk
3 teaspoonfuls baking powder	1 tablespoonful fat
½ teaspoonful salt	1 tablespoonful sugar
1 or 2 eggs	

Sift the dry ingredients together; add the milk, stir until smooth; add the eggs and beat well. Bake in greased tins.

Mrs. Edwards, who sent this recipe, said that she varied it at times. If eggs were scarce, she used only one and sometimes none; when she used no eggs, she used an extra teaspoonful of baking powder. Why? Sometimes she used more fat and other times more sugar. At times she used some of the left-over cooked cereal in place of an equal quantity of flour; at other times, just to make the muffins different, she used $\frac{1}{2}$ cup corn-meal or Graham or whole wheat flour. She said that she varied the amount of liquid a little with these different flours.

A recipe which she liked very much was one taken from Miss Farmer's Boston Cooking School Cook Book. Mrs. Edwards said that she did not use this recipe very often as butter was usually too high priced, but that she would donate the recipe anyway because the muffins were so good (Fig. 63).



FIG. 63.—Natalie Underwood made twin mountain muffins for luncheon at home.

TWIN MOUNTAIN MUFFINS (Fannie M. Farmer)

$\frac{1}{4}$ cup butter	$\frac{3}{4}$ cup milk
$\frac{1}{4}$ cup sugar	2 cups flour
1 egg	3 teaspoonfuls baking powder

Cream the butter; add the sugar and the egg well beaten; sift the baking powder with the flour and add to the first mixture, alternating with the milk. Bake in buttered gem pans twenty-five minutes.

POPOVERS

1 cup flour	2 eggs
$\frac{1}{2}$ teaspoonful salt	1 cup milk
1 tablespoonful fat	

Sift the flour and salt together; stir the milk into the beaten eggs; add this mixture to the flour slowly to make a very smooth batter; add the fat; beat until smooth; pour into buttered earthen cups or deep muffin tins. Put into a very hot oven and then reduce the heat. Bake from three quarters to one hour. The popovers should be crisp, brown, and hollow.

Do you know what makes popovers so light and hollow? Ask your teacher to tell you.

Miss Ashley told the girls that she had made popovers one morning for breakfast and had had a few left over so was going to use them for dessert for supper. She said that she made them crisp again by setting them in the oven. Then she made a slit around the top of each, put in a few tablespoonfuls of raspberries and a spoonful of whipped cream and sprinkled powdered sugar over the top. Doesn't that sound like a good dessert?

SUGGESTIONS FOR REVIEW

1. Describe the appearance of the cook you would like to see in the kitchen.
2. Suggest several ways of saving steps when getting meals.
3. Tell what you learned in this lesson about the use of baking powder and soda.
4. Suppose you had planned to make biscuit for luncheon and found that the milk had soured. What would you do?
5. Name and describe several dishes that might be made by using the biscuit dough recipe.

LESSON 10

GETTING READY TO SERVE LUNCHEONS AT SCHOOL

"What shall we have to eat?" was the first question to be answered.

Making a dish for luncheon and helping mother prepare the home luncheon are quite different from deciding on what to have and preparing and serving an entire luncheon. All of the Ellen H. Richards girls could cook three or four soups, could make several "main dishes," some appetizing salads, two or three quick breads, several kinds of sandwiches, and a few simple desserts. But did they know what foods would make good combinations in the same meal, and could they plan their work and serve a simple meal on time? They had had no opportunity for this kind of work, so Miss Ashley planned to give them some practice. This practice was given first at school and later in the Sunnyside apartment.

The girls in the afternoon home-making class were very much surprised when they learned that they were to change their cooking class period to the 10.30 hour and their general science to the afternoon period. Miss Ashley asked the principal of the school for this change in program for each class at different times, so that the girls could have time to prepare and serve meals at the time of day when meals should be eaten. She did not believe that school children should eat a meal in the middle of the afternoon, neither did she want the girls to cook a luncheon and not serve it.

At first the principal said that changing programs was not possible, but when Miss Ashley showed him how it could be done with little inconvenience to anyone, he was quite willing and thought it was a very good plan. So hereafter when any class was expected to serve a meal Miss Ashley made arrangements with the teachers and the meal was served about noon. She always asked the pupils to tell their mothers so that no one would be anxious about the absence of the girls at home should they not go home for lunch.

For the luncheon that the girls prepared and served to themselves the class was divided into groups of four girls, each to represent a family (Fig. 64). Each family chose its own menu at the previous lesson, distributed the work among members of the group, and went to work in a business-like way when the class began.

I. Miss Ashley asks for a change in program.

II. The plan of class work.

Miss Ashley did the marketing for the groups the first time they cooked meals, and had things in their proper places just as the girls might find them at home. Later in the year the girls did their own marketing. The lunches were served in simple family style on some of the sewing tables at one end of the room, and after the meal the left-over food was cared for, the dishes washed and put away, and the laboratory put in order for the afternoon classes.



FIG. 64. — What fun the girls had planning their menus!

“What shall we have to eat?” That was the first thing the girls thought of the day Miss Ashley told them her plan. They recalled previous lessons in which they had studied about the needs of the body and about the foods that supplied these needs, and concluded to have each class of foodstuffs represented in their menus. They remembered some of the fuel foods, and some of the building and repair ones. They recalled what had

III.
Choosing
the
luncheon
menus.

been said about the need for milk, vegetables, and fruit and felt that these also must be included.

Of course the lunch must be kept simple, just such lunches as most people enjoy. There must be nothing that would require too long cooking, for the time was limited. There must not be too many things to do, and each dish was to be a repetition or a modification of one prepared at school in a previous lesson. The girls decided that there should not be more than three things to prepare and that the fourth girl should be responsible for arranging the dining room and table.

The girls had quite an interesting time planning the menus. What do you think of their choices? Why do you suppose they chose these?

LUNCHEON MENUS

I

Macaroni and cheese

Pickle relish sandwiches

Baked apples

II

Cream of tomato soup

Toasted crackers

Hot biscuit

Apple and celery salad

III

Potato soup

Croutons

Peanut butter sandwiches

Apple sauce

IV

Banana and date salad

Cocoa

Bread and butter sandwiches

After the captains of the groups had written their menus on the board the class criticized and compared them. There are many ways of telling whether or not a menu is good and the girls learned more about the subject later, but this time they were interested in just a few points. When asked for her opinion of menu No. I, Edith Potter said that she thought it was good because the macaroni and bread gave strength for work, the cheese and milk gave building material, the apples gave mineral matter, and so did the milk, and the pickle relish made it appetizing.

Constance criticized No. III by saying that all of the needs of the body were provided for. The potatoes, croutons, and bread furnished strength for work, the peanut butter gave building material, the apple sauce gave some acid and mineral matter, and the milk in the soup would make up what the other food might lack.

Natalie thought group II should not have hot biscuit, for she had heard that they were not very easily digested. Her criticism was a good one, for many persons find hot breads difficult of digestion. The girls in the group promised to bake them very thoroughly and to chew them well. Miss Ashley said that too often hot breads were not easy to digest because they were not properly masticated and mixed with the saliva. The apple and celery salad was good to eat with the biscuit, for it would have to be well chewed.

How would you criticize No. IV? Does it contain what the body needs? Which foods provide strength for work? Building material? Mineral matter? In what dish is the milk provided?

Can you write several menus that provide what the body needs? Try it and have your teacher criticize them. Talk over with your mother the meals you have at home. See whether they contain what is needed.



FIG. 65. — Arrangement of the laboratory.

After the menus had been planned the girls began to find other problems. Where are we going to serve the luncheons? How shall the tables be set? What dishes shall we use? How shall we divide the work? These and other questions had to be settled.

V. How shall the table be set?

Do you remember the arrangement of the home-making room in the Ellen H. Richards School? The one large room was used for all of the home making

work (Fig. 65). There was no separate sewing room or dining room but one end of the long laboratory was provided with tables and by using some pretty screens which the ninth-grade girls had covered with chintz it was easy to make a very attractive dining room with little work (Fig. 66).

1. The dining room.

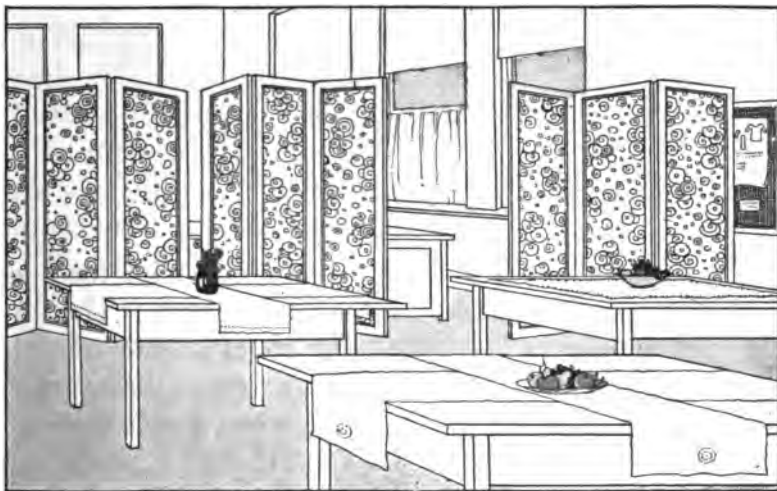


FIG. 66. — Laboratory fitted with screens and tables to be used as a dining room.

Miss Ashley said that the dining room should be one of the most attractive rooms in the house, for it is here that the members of the family meet three times a day and have a chance to talk over family affairs together. She said that she liked a dining room in which the sun shone in the early morning, for it seemed to start the family off in a cheery mood.

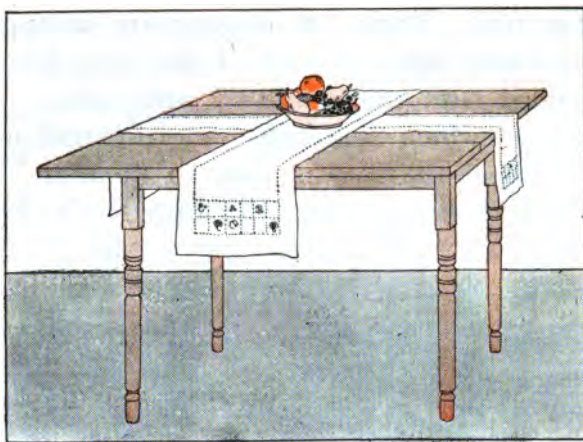


FIG. 67. — The girls used runners like these.

Everyone will agree that a room in which food is served and eaten should be spotlessly clean. The air should be fresh and the room should not be too warm. The girls who were to be responsible for the dining room when meals were to be served saw at once that they would have to make the place attractive and very clean. They were glad that there were no rugs to sweep and they began to appreciate what they had learned when buying furniture for the apartment. They were glad also that the sewing tables were plain with a smooth finish for they had seen Mrs. Edwards's table set with doilies and Miss Ashley's with the pretty Japanese runners and had been looking forward to the time when they might use the new doilies and runners that lay in the linen drawer.

2. The dining table.

One of the girls asked Miss Ashley whether they might

put them on the tables to see how they would look. Miss Ashley was eager to see, too, and suggested that they set two tables, one with doilies, and the other with runners, and that they put on the dishes and silver, too. Natalie ran for the dust cloth and gave the tables a good rubbing to make them shine.

On one table the runners were placed as you see them in Fig. 67, and on the other a plate doily was placed at each cover, another doily above this one and a little to the left for the bread-and-butter plate, and a third, a smaller one, above and a little to the right for the glass. Do you know what the word "cover" means when used in this connection?

The girls laid the silver very carefully (Fig. 68). The knives and forks and spoons were placed at a

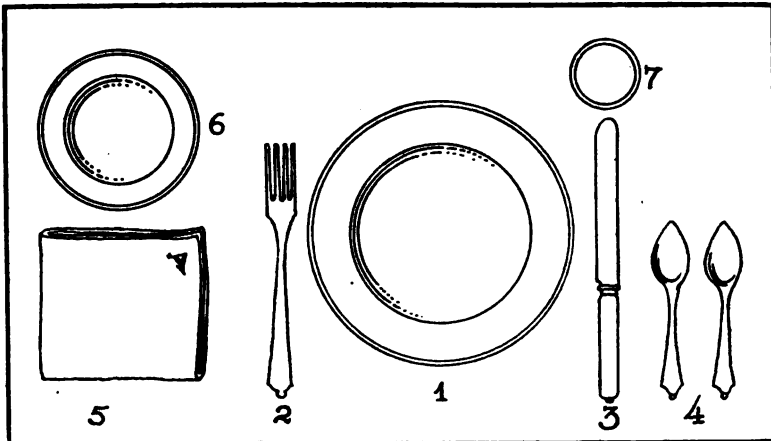


FIG. 68. — A plan for laying one cover. 1, plate; 2, fork; 3, knife; 4, spoons; 5, napkin; 6, bread-and-butter plate; 7, glass for water.

distance of about three fourths of an inch to one inch from the edge of the table parallel to each other. The knife was placed to the right of the cover, the edge turned toward the plate; the fork, with tines turned up, was placed at the left; the spoons, bowls up, were placed next to the knife. The table looks much better when things are arranged symmetrically than when they are done carelessly. The napkin may be laid



FIG. 69. — Some simple flower arrangement for the table.

at the left of the fork. The water glass is most convenient if placed just above the knife. Miss Ashley suggested that only the silver that was necessary for the meal should be put on the table. If only one spoon was to be used there was no need to handle two; if no knife was required it was not necessary to put one on. The girls had to plan ahead of time just what was needed. What silver would be needed for menu No. II? Where would the butter spreaders, if used, be placed?

The salt and pepper shakers were placed where it would be convenient for someone to reach them.

“May we bring some flowers for our luncheon?” asked Dorothy. The girls thought that flowers would add to the attractiveness of the tables if only a few were used. Mrs. Vincent had some pink and white cosmos which Dorothy thought would be very decorative. Fresh flowers give a lovely touch to the dining table, but they must not obstruct the view of persons sitting opposite each other (Fig. 69). Flowers may be kept fresh for several days if the water is changed daily. Have you ever clipped the stems of wilting



FIG. 70.—Clipping the stems of wilting flowers under water revives them.

flowers under water (Fig. 70)? Try it some time and see what happens. Miss Ashley had a little fern on her table. Every evening she set the pot into a dish of water and in this way kept it green for many weeks.

“Let’s pretend that we are serving our luncheons,” suggested Constance. But it was too late so Miss Ashley suggested that they put the room in order and leave the serving until the next time. They could learn how to serve when they had the class luncheons so that when they served the teachers, who were so soon to be invited, everything would be done easily and nicely.

How many of these girls, do you suppose, thought about the menu planning and table setting when they went home that night? Setting the table

5. Setting the table at home. seems to be a schoolgirl's work. It seems only natural that the daughter should do this while mother is getting the evening meal. It gives



FIG. 71. — Mrs. Moore enjoys having Constance help her prepare the evening meal. It gives them such a good chance to visit.

them both such a good chance to visit and to tell each other interesting things that have happened during the day (Fig. 71). In addition it gives one a good opportunity to contribute to the happiness of the family by making the evening meal attractive for those who come home tired from a day's hard work. The thought-

fulness shown by having a bright, clean room and an attractively set table will help to make the evening a happy one.

SUGGESTIONS FOR REVIEW

1. What kind of salad do you think would be good to serve at a meal with macaroni and cheese as the main dish? Why?
2. Substitute rice pudding for the salad in menu No. II and criticize the menu.
3. Write a description of the luncheon table at which you would enjoy sitting.
4. What help do you give your mother in preparing meals?

LESSON II

HOW SHALL THE LUNCHEONS BE SERVED?

In Miss Ashley's class, for certain kinds of work, the girls were divided into groups. Each group appointed its own captain or leader, who was held responsible for the work of her team. They followed this plan when getting ready to serve meals at school. The day before serving the luncheons the various groups met and each planned its own work so that when the girls came into the kitchen each knew just what she was expected to do. Miss Ashley was always within call and could be consulted up to the time the class began, but during the class period each girl was expected to do independent work. Some of the mothers told Miss Ashley later that whenever their daughters had any special work to do at school they practiced doing it at home some time

before. Mrs. Moore said that Constance had baked biscuit three times after her group had decided to serve biscuit for luncheon, and Dorothy Vincent said that she had prepared a dish of macaroni and cheese for the family dinner and had got the apples ready to bake, while



FIG. 72. — Constance Moore practiced making baking powder biscuits at home.

Natalie, who was to make the corn soup for her group, served corn soup to her family one evening for their dinner (Fig. 72).

Of course it is a responsibility to cook food so that others will enjoy it, and everyone needs practice. The girls' mothers were glad to have them practice in the

home kitchens and were always pleased when meals were to be served at school. You already know how they cooked the various dishes, but it may interest you to know how the luncheons were served.

The serving of the meal was of course of special interest on this occasion. As each group represented a family, all were seated and enjoyed the meal together. Meal time is often the only time that all of the members of a family get together,



FIG. 73. — Meal time should be one of the happiest times of the day.

and it should be one of the happiest times of the day. Food digests better when one is in good spirits, and each member of the family should try to contribute some pleasure to the family gathering (Fig. 73).

It seems unnecessary to say that hands and faces should be clean but maybe it is worth thinking about.

Each member of the family should be as prompt as

1. At the family table.

possible and unless there are very good reasons, should remain until the meal is finished. If it is necessary to leave before, it is courteous to ask one's mother for permission to be excused.

It will be necessary in most families for different members to share the work of serving the meal. The father usually serves the main dishes, the mother pours the coffee or tea, and the children help in other ways. It seems quite the

natural thing for a daughter to wait on the table, although there is no reason why her brother should not take his turn, too. Waiting on the table is something that every eighth-grade girl should be able to do nicely and without absenting herself from the table for very long.

Everything to be used during the first course may be placed on the table; if this is done the waitress may rise quietly at the end of the course, remove the food and dishes that are no longer needed, and serve the next course.

a. Waiting on the table.



FIG. 74. — A dish which is to be placed before a person is set down from the right-hand side.

The one who is to wait on the table should see that

the table has been correctly set, that the bread, butter, jelly, or relish, if these are used, are in their places, that the glasses are three fourths full of cold fresh water, and that everything is in readiness so that she will not have to get up until it is time to serve the next course.

In serving, a dish which is to be placed before a person is set down from the right (Fig. 74), but if a



FIG. 75. — If one is to help himself from the dish, it is passed from the left-hand side.

person is to help himself from the dish it is passed from the left, so that the person may help himself conveniently with his right hand (Fig. 75).

In removing a course the larger dishes containing food are taken first, then the smaller ones, and finally the individual service. The dishes should not be piled upon each other on the table; it is better to remove them one by one and put them on a near-by tray. A wheel table like Fig. 76 is a great convenience and time saver.

Before bringing in the next course it is well to refill the glasses. Care should be taken never to touch the

upper part of the glass (Fig. 77). The crumbs may be removed from the table by using a folded napkin and plate or a crumb knife and tray.

“Clearing up” after the meal is easy or hard depending upon how well the one who cooked the meal managed her work while doing it. A good manager will plan to have most of the kitchen dishes washed by the time the meal is ready for the table and will have the pots and pans soaking. This is not difficult to accomplish if there is hot running water in the kitchen.

The food that is left over should be put away carefully on clean dishes; bread should be put into the bread box so that it will not dry out, scraps of butter should be put into a suitable dish and placed in the refrigerator. All scraps of food should be properly disposed of and the dishes scraped and put into neat piles for washing (Fig. 78). Dishwashing is really easy when all of the preliminary work is well done.



FIG. 76. — A wheel tray is a great convenience in serving.

The dining room, too, must be put in order. The crumbs should be taken from the table and the cloth folded and put away. No crumbs or refuse should be allowed to remain on the floor. It is well to air the dining room while the dishes are being washed.

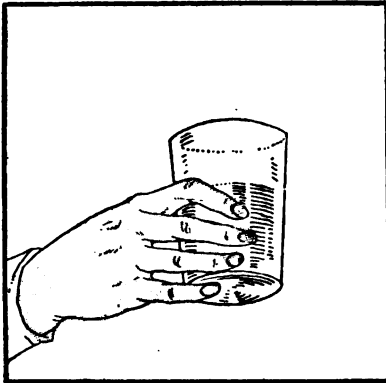


FIG. 77. — Do not allow the fingers to touch the upper part of the glass.

The girls had rather a good time at their luncheon. However, they made some mistakes in

4. When accidents occur.

cooking and in serving which they talked over later. For instance, Margaret filled a glass so full that some of the water spilled on the table, and Edith

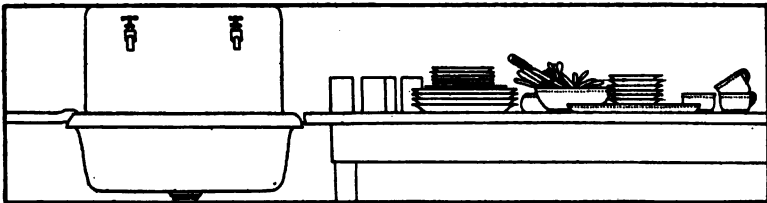


FIG. 78. — Dishwashing is easy after the dishes are scraped and placed in neat piles.

dropped her fork on the floor. Miss Ashley said that no one but the waitress should notice accidents and that she should do what she could to make things right. Of course Constance wiped up the water with a

clean napkin, and Dorothy, who was waitress at Edith's table, quietly picked up the fork that had fallen and replaced it with a clean one.

What shall be done when company comes? Every family at some time enjoys having friends come in to share a meal, and, to show appreciation of their guests, some extra attention is usually given to the meal, maybe some special dish prepared or some extra service given. If meals are always nicely prepared and served, a guest may be welcomed at any time, but there are always occasions when special preparation is felt to be necessary. The Sunnysiders felt that the luncheon to which they were to invite their teachers later was a special occasion, and they were eager to prepare and to serve it as well as possible. One day they took part of a class period in discussing what to serve, and to be sure that they would serve it properly, went through with what Miss Ashley called a "mock service." After having planned, cooked, and served a meal to themselves they felt quite confident that they could have company, and thereafter Miss Ashley allowed each group in turn to invite mothers, fathers, or teachers to an occasional meal in the apartment.

Sometimes the girls pretended that they were real waitresses and on such occasions they served the meal more formally. Instead of having the food on the table and members of the family serve it, the waitress served each individual. She was careful to stand to the

right of the person when placing anything before him, and to pass to the left the dishes from which the guest was to help himself. She kept the glasses filled and saw to it that relishes and accessories were passed. In removing dishes she took care never to reach in front of the guest, and she tried to do all her work quietly and quickly. Dishes were not piled upon each other, but were placed on a tray and removed.

If you were asked to serve the following luncheon in a formal manner, how would you do it? Ask your teacher to help you.

MENU

	Tomato Soup	Crackers
Broiled Lamb Chops		Creamed Potatoes
Rolls	Butter	Jelly
Ice cream		Cake

As usual the question of table etiquette arose, so Miss Ashley and the girls spent a little time one day discussing some of the points that were **III. Table manners.** brought up. Edith Potter wrote down some of the points discussed, and a page in her notebook contains the following:

1. A well-bred girl comes to the table with a clean face and hands, and hair neatly brushed.
2. She stands to the left of her chair until all sit down and does not leave the table, unless she is acting as waitress, until the meal is finished.

3. She eats slowly, chews with her mouth closed, and is careful not to make any noise with her lips. She is careful, too, not to drink while she has solid food in her mouth.



FIG. 79. — (a) The knife and fork should be placed on the plate. (b) The spoon should never be allowed to stand in the cup, but should be placed on the saucer.

4. She is careful not to spill any food or to drop any of the silver.

5. She should learn how to hold

her knife, fork, and spoon so that she will not appear awkward, and should place them in the right place when not using them. The knife and fork should be placed on the plate and should not be allowed to lie on the table after they have been used. A spoon should never

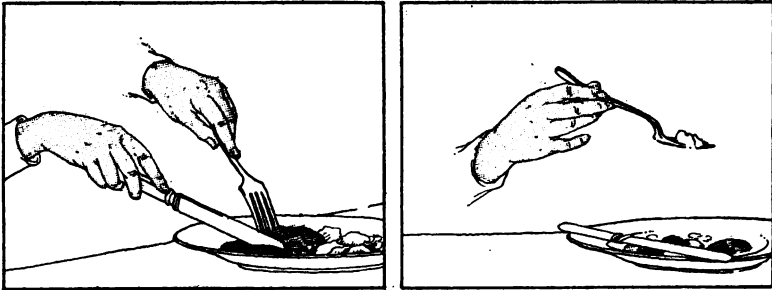


FIG. 80. — Correct ways of holding the fork and knife.

stand in a cup or glass, but should be placed on the saucer (Fig. 79). If in doubt as to what piece of silver to use, watch the hostess.

6. A well-bred girl does not monopolize the con-

versation at the table, but she should enter into it when occasion permits.

7. "If you please," and "Thank you" are good phrases to remember and use. ("Thank you" is much more pleasing than "thanks.")

Notice the sketches which Edith found and pasted in her book. Several of the girls brought clippings and pictures of the right way and the wrong way of doing things and put them on the bulletin board in the school kitchen.

SUGGESTIONS FOR REVIEW

1. How could you share the preparation and serving of the home meals with your mother?
2. Write a luncheon menu that you could cook and serve by yourself.
3. Make a drawing of one cover laid for this luncheon.
4. Tell just how you would serve the luncheon to your family.
5. Would you do it differently if there were company?
6. Add to the page from Edith Potter's notebook whatever you think is necessary.



CHAPTER III

PRACTICING THE HOUSEHOLD ARTS IN THE SUNNYSIDE APARTMENT

“Sunnyside” was just another part of the Ellen H. Richards School and the girls took great pleasure in helping to furnish it and to keep it clean and in good order. They also prepared meals there occasionally and entertained their friends. Doing the work at Sunnyside was like doing it at home, and they learned many new things from Miss Ashley and Miss Roberts which they later used in their own homes.

LESSON 12

CLEANING THE APARTMENT AND PUTTING IT IN ORDER

Have you ever helped to clean an apartment before moving in?

After the paper hangers and painters had decorated the apartment and the furniture had been unpacked

and placed in the several rooms, the eighth-grade girls went over to finish the cleaning and to put the apartment in order. They put on their colored housework aprons and caps and in this way protected their pretty, clean school dresses.

**1. Clean-
ing the
rooms.**

They took with them from the school all of the cleaning materials needed, as Miss Ashley did not have enough in the apartment for thirteen girls to use. They carried two or more brooms, a long-handled brush, a dustless mop, pails, scrubbing brushes, cleaning cloths, yellow soap, a bottle of ammonia, some whiting, and a roll of clean white paper for the drawers and shelves. Mr. Swift, the janitor, brought up a couple of stepladders.

**1. Cleaning
equipment.**

The class was divided into groups of two, three, or four girls, and each group took one room. They talked about the best way of doing the work and when all felt sure how to begin they went at their work in earnest.

**2. Dividing
the work.**

Constance Moore and Marjorie Allen chose the bathroom. "Where shall we begin?" asked Constance. "Let's begin as high up as the room needs cleaning and work down," answered Marjorie, who had helped with the housecleaning in her own home, "that's the way mother does sometimes." So they decided to wash the window first, as the walls and woodwork had been cleaned by the decorators. First Marjorie got up on the step-ladder and took down the shade and handed it to Con-

**3. The
bathroom.**

**a. Cleaning
windows.**

stance, who unrolled it and wiped the dust from it (Fig. 81). Then she wiped all the loose dust from the



FIG. 81. — Constance and Marjorie at work in the bathroom.

window and wood-work so that she would not get the water and cloths too dirty at once. She had ready a basin of water into which she had poured a little ammonia, and a clean cloth made of outing flannel with which she washed the glass thoroughly. After it was clean she wiped it with a clean, dry cloth that was not linty. The woodwork had just been painted, so it needed no further cleaning.

Before Marjorie came down from the ladder Constance handed her the shade, which she replaced. "Now for the sash curtain, and the window is finished!"

Constance began with the tub. She first wiped out

the accumulated loose dust and dirt with an old cloth, being careful to keep it on the inside of the cloth so that it would not be scattered. Then she drew a little hot water into the tub and with her scrubbing brush and yellow soap scrubbed the tub thoroughly. Some of the dark rings around the tub were very persistent, so Constance poured a little kerosene on her cloth and tried again. This time every bit of dirt vanished. She rinsed the whole with clean, soapy water to remove all trace of oil, and gave it another rinse with clear, hot water.

The wash basin was cleansed in the same way. "This basin is going to be difficult to keep clean because someone has used a gritty cleaning material on it," said Miss Ashley later when she came in to see how the girls were getting along. "Gritty material should never be used since it scratches the enamel and produces a rough surface which holds the dirt. Ammonia or a little kerosene will remove the dirt very easily without injuring the enamel." This was something new to the girls, who did not know much about cleaning materials.

The floor was made of tile and after sweeping it Constance saw no better way of cleaning it than to get down on her knees and scrub it hard with a brush and soapy water. She cleaned back of the tub and under it and was not satisfied until every inch was as clean as she could make it. When the water in the pail became badly discolored, Constance

poured it out and took fresh, clean water, and in that way the whole floor was clear looking when she finished

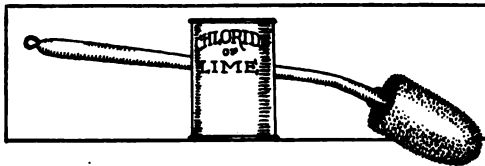


FIG. 82. — Two useful articles for cleansing the toilet.

wiping the last piece dry. While she was cleaning the floor Constance protected herself by kneeling on a mat that Miss Ashley gave her.

After Constance cleaned the floor Marjorie cared for the toilet. They left the toilet until last, for they knew

e. The toilet.

that they should have to empty the water used for cleaning purposes and they did not want to have to clean it twice. After flushing it Marjorie emptied a pail of hot, soapy water into the bowl and cleaned it with a long, crooked-handled brush. See Fig. 82. A brush of this shape cleanses the lower part of the bowl well and should be used daily. Mar-

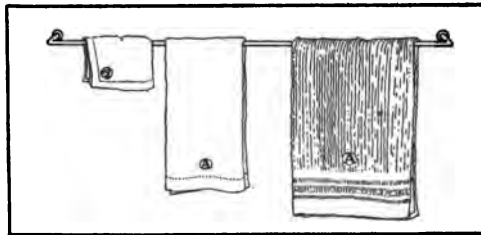


FIG. 83. — Each person should have his own towel rack and use his own towels.

jorie was careful to clean every part thoroughly. She washed the seat with warm, soapy water and wiped it dry. With the seat raised she flushed the bowl with fresh water and then poured in some chloride of lime.

"Now let's make it look as though someone lived here. I'll ask Miss Ashley for the towels and wash cloths."

When Constance returned with the linen they put two towels and two wash cloths on each of the towel racks provided. "Isn't it nice that each person has her individual towel rack and towel these days?" (Fig. 83.) "We all do at home, too."

f. The finishing touches.

"Let's ask Miss Ashley to come and see how nice it looks," said Marjorie.

The three girls who were at work in the kitchen thought that they had the most fun, for they had to find places for all the utensils and dishes. You may remember that the kitchen walls were painted buff, that the floor had been stained and oiled, and that the room was equipped with a gas stove, two laundry tubs the tops of which were to be used as a table, a sink, and a cupboard with shelves and drawers for utensils and dishes. The inside of the cupboard was painted white.

4. Cleaning the kitchen and arranging the utensils.

Dorothy Vincent, Katherine Swift, and the new girl, Mabel White, wondered where to begin and how to divide the work. Mabel thought it best to get the inside of the tubs cleaned first so that they could have a table, and then the cupboard and refrigerator so that they could put things away as they washed the dishes and store the few groceries. "One of us can wash the windows later when the other girls are through with the stepladder. And let's scrub the floor the very

a. Planning their work.

b. Getting the "table" ready.

last thing." The tubs were made of porcelain and were not difficult to clean. Warm, soapy water soon made them clean and shining. Dorothy and Katherine each took one and in a few minutes the covers were down and the girls had a work table. They scrubbed the metal covers and wiped them very dry but did not put the oilcloth on until they were ready to leave the kitchen.

The refrigerator was small and not very

c. Cleaning the refrigerator.

new. Mabel took a pail of hot water, into which she put two tablespoons of sal soda, and washed very thoroughly the place where the ice was put

and the inside of the door. She also removed the shelves from the food compartment and washed them, then scalded them with hot water at the sink. While the shelves were airing and drying in the sun she washed the inside with strong soda water and left it open to air.



FIG. 84. — Mabel gave the refrigerator a thorough cleansing.

She also poured some strong soap suds down the drain pipe and followed this with a kettle of boiling water (Fig. 84).

The cupboard was clean and fresh with its coat of white paint. To protect it and to make it easier to keep



FIG. 85. — Dorothy put clean white paper on the cupboard shelves.

clean Dorothy cut some clean white paper to fit each shelf and drawer and put it in place (Fig. 85). Some people prefer the shelves bare but Miss Ashley said that she would rather remove the paper than wash the paint. Some people put newspaper on the shelves, but that doesn't seem quite as clean as one would like.

Then the dishwashing began. The girls tried to

remember the order in which dishes should be washed and did it as well as they could. The dishes had been packed and were very dusty so it was necessary to change the water frequently and to use a good many towels. Miss Roberts came in and helped to arrange them for she and Miss Ashley were to use them. The

d. Preparing the cupboard shelves.

e. Putting the dishes and utensils away.

girls noticed that she put the things they would use every day in the most convenient places and those not so frequently used higher up in the cupboard. Some of the cooking utensils found hooks under the shelf above the stove, while others were placed on the shelves in the lower part of the cupboard.

To make more room small hooks were placed under some of the shelves and the cups and even some of the cooking utensils were *hung* in the cupboard.

Dishwashing is never finished until the sink is put into perfect condition. The girls had learned that at school and of course practiced it here.

f. The sink must be left clean and in good condition.

There were no crumbs or scraps of food, for these dishes had not been used, but there were bits of excelsior and packing material and a great deal of dust and other small particles of refuse to remove. All solid material was caught by the strainer with which the sink was provided and was lifted with a little shovel-like utensil and deposited with other waste to be removed. Warm, soapy water and a little kerosene on a cloth removed all discoloration. Boiling water was poured down the drain.

Miss Ashley said that after using the sink, wash-tubs, bathtub, or closet, one should always flush them with clean water so that no water containing waste would remain in the trap underneath the fixture. "What is the trap?" questioned Mabel.

"The trap is the bend in the pipe just underneath the fixture, and it holds the last water that flows down

the pipe" (Fig. 86), Miss Ashley explained as she showed them the traps underneath the sink and laundry tubs. The water that is "trapped" acts as a seal and keeps disagreeable odors and gases from coming back into the room.

The faucets, which were of nickel, were carefully but vigorously washed and wiped dry. Nickel faucets are not hard to keep bright and shining when washed daily with soapy water.

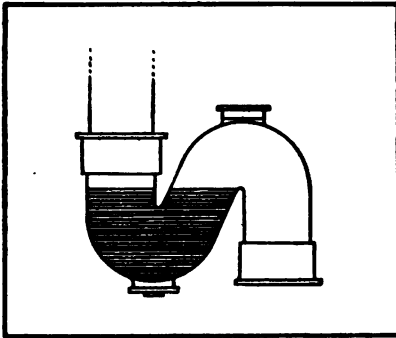


FIG. 86. — The trap holds the last water that flows down the pipe.

The gas company had put in a new range for Miss Ashley and ^{g.} The gas there was noth- ^{range.}

ing to do to it except to wipe off all the dust. Miss Ashley said that another time they could have the fun of really

cleaning the stove. "Just wait until we have broiled steak or chops some day. Then you will have a good chance to show how well you can clean," she said, laughing.

The window and the floor waited until last. You know how the other girls cleaned the bathroom window and floor. All of the windows in the apartment were cleaned in the same way, but the floors ^{h.} Cleaning the oiled floor.

The oiled floors were simply wiped up with a mop wrung

out of warm water. No soap was used since it would take up too much of the oil.

“No one would know this kitchen for the same place we came into two hours ago,” said Dorothy, as she rinsed the last dish towel and hung it on the line. “I wish we could stay here and cook Miss Roberts’ dinner. Wouldn’t it be fun?”



FIG. 87. — Natalie was responsible for hanging the curtains.

The work in the other rooms was progressing quite as well as in the kitchen and bathroom. Natalie was captain of a group of four in the living room and dining room. The washing of windows and the hanging of curtains took considerable time, for the curtain fixtures had to be put up, too, and it was not an easy task (Fig. 87). The overhangings got mixed up and once — or was it twice? — one was put on wrong side out and another upside

5. The
living room
and dining
room.

down. "If you would match them up first and spread them out, you wouldn't make so many mistakes," said



FIG. 88. — The dustless mop was used and every piece of furniture was wiped with a clean soft cloth.

The dustless mop was used on the floors to take up the surface dust and the rugs were rolled into place (Fig. 88). The furniture was placed as had been agreed before it was bought. Every piece was carefully dusted with the clean, soft dust cloths which the girls had made in the sewing classes. The dining room table, which the girls

Natalie, ^{a. Windows and curtains.} who was responsible for six pairs of curtains which were of the same color but not of the same length, and who felt that her helpers had not been very thoughtful about their work.

Finally the curtains were hung and of course all the girls from the other parts of the house were called in to admire them.

^{b. The floors.}

^{c. Dusting the furniture.}

had stained and waxed, was given an extra rub to make it shine. Miss Ashley said that its appearance would improve as more wax was added and frequent hard rubbings were given.

The couch in the living room was to be used for a bed when necessary, and Miss Ashley showed the girls how to make it. The girls who were putting the bedrooms in order came out to watch, for all the beds were to be made in the same way (Fig. 89). Over the mattress was placed a pad

d. The living room couch.

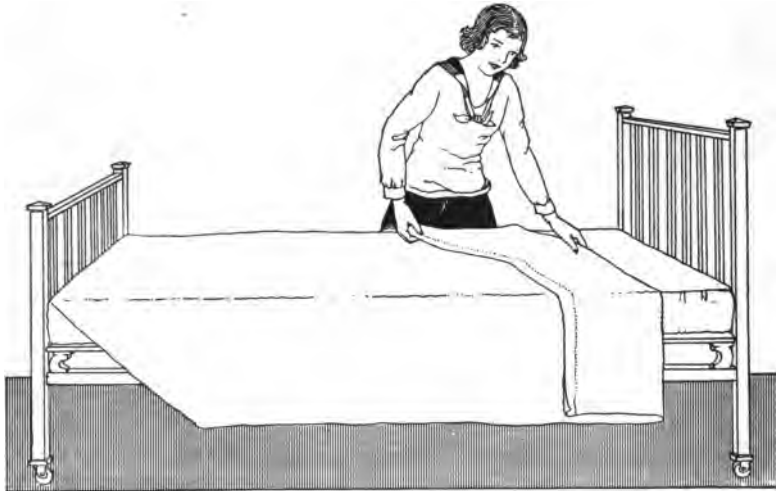


FIG. 89. — Have you learned how to make beds in your home-making classes?

to protect it. The pad was a quilted, cotton-lined pad easily made at home if one wants to take the trouble. The under sheet was stretched on very tight and each corner was folded under the mattress, envelope

style. The wider hem was placed at the head of the couch. The upper sheet was placed wrong side up with about fifteen inches allowed to extend down over the covers. The bottom was well tucked in. Then the blanket was put on and tucked in, the upper sheet turned down over it, and the whole covered with a spread and finally the colored couch cover. Miss Ashley said that in making the regular beds she would turn the sheet down over the spread and then adjust the pillows at the head.

Miss Washburn, the art teacher, came in and helped with the hanging of the pictures and the arrangement of the few ornaments and other details of the two rooms. (Read Lesson 10 in the companion volume.)

c. Hanging pictures and arranging the details of the room.

The bedrooms were not neglected while the other rooms were being cared for. The girls had been very quiet under the leadership of Edith Potter. They sat down and planned just how to go ahead with their work. They had much the same problem that the girls had in the living room. The windows had to be washed and the curtains and overdraperies hung. However, when the curtains had been hung they did not have to come down, for the girls had matched all of them first.

6. The bedrooms.

They made the beds as Miss Ashley had showed them in the living room, and adjusted the pillows as she suggested.

The floors were painted and were easily cleaned by

brushing up the lint with the long-handled brush (Fig. 90). The dust was wiped up with the dustless mop. The small rag rugs were placed between the bed and the dresser in each room.

The girls wiped out the dresser drawers and put in white paper to fit. The closets were dusted and wiped with a damp cloth and clean paper was placed on the shelves and in the drawers.

They looked at the results of the afternoon's work with a great deal of satisfaction and were glad that Miss Ashley and Miss Roberts were to enjoy such pretty, clean rooms.

Everything that the girls could do was done. The apartment was ready for Miss Ashley and Miss Roberts to occupy. Their personal things would make it look more homelike and cozy and later we shall see them at home at Sunnyside.

"We are not quite through, girls. All of the things we brought from our school kitchen must be returned, cleaned, and put into their proper places

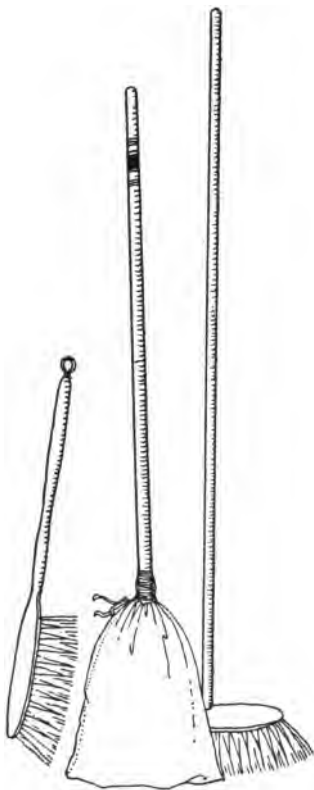


FIG. 90.—A part of Miss Ashley's cleaning equipment. Notice the bag over the broom.

(Fig. 91). We have more room over there to care for them," said Miss Ashley. The soiled cloths were put into the pails and when the class returned to the school kitchen all the cleaning cloths were washed and scalded and hung to dry. The cleaning materials were put on the shelves.

II. Putting away the cleaning equipment.

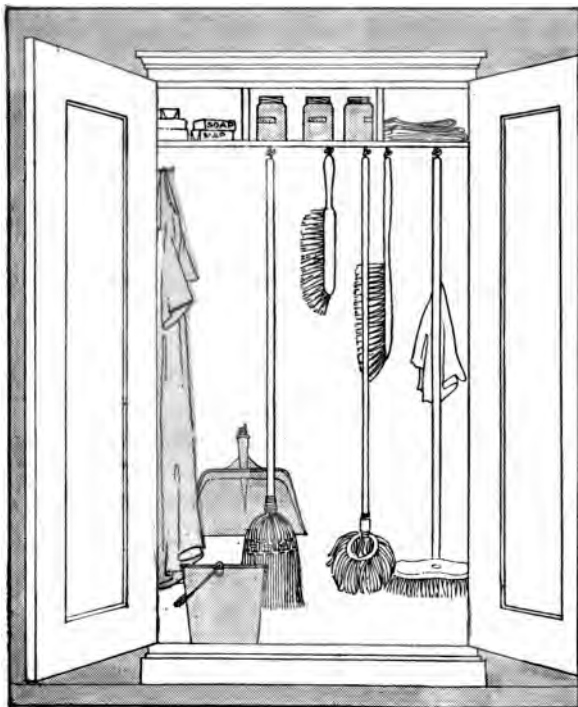


FIG. 91. — Cleaning equipment should be properly cared for.

The brooms and mops were freed from dust and hung in their places. The wet brushes were set aside to dry.

The girls hung their caps and aprons in their lockers. After washing their hands and cleaning their nails they rubbed their hands, which were not used to housecleaning, with some hand lotion which always stood on the shelf for their use.

“Let’s ask Miss Ashley if our mothers can come over to see the apartment some day,” said Natalie to Constance as they walked home from school together that afternoon.

SUGGESTIONS FOR REVIEW

1. If your family should move into a new house or apartment, what could you do to help settle it?
2. What kind of cleaning equipment would you need? After using it, how would you care for it?
3. How would you wash the windows?
4. How do you clean the bathtub at home? The wash basin? The toilet?
5. What kind of floor have you in your kitchen? How do you care for it?
6. What care do you give to your bedroom? Have you ever cared for it every day for a week?
7. What trouble did the girls have in hanging curtains? How could they have avoided it?

LESSON 13

A HOUSEWARMING AT SUNNYSIDE

Sandwiches and tea are made and served. The mothers of the girls in Miss Ashley’s classes are invited to visit the new school and Sunnyside and to learn what their daughters are doing in the household arts classes.

Whatever Constance and Natalie suggested was sure to be well received by the other members of the class,

and Miss Ashley, too, was very much interested when the request for the privilege of inviting their mothers to the school was made by the girls. Miss Ashley had not yet had time to visit all the girls and their mothers in their homes, as she had planned to do, and was glad of this opportunity to meet them.

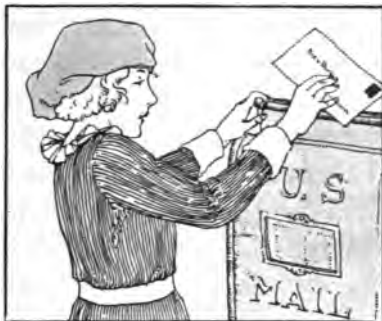


FIG. 92. — What fun to invite guests to a party!

“Let’s have a real party with invitations and refreshments,”

suggested Miss Ashley. And so a party was planned. The girls wrote the invitations one day in their English composition class and slipped them

**I. Plan-
ning a
“real”
party.**

into the mail boxes of their own homes that evening. The invitations read as follows :

The pupils of the Household Arts Classes
of the Ellen H. Richards School
request the pleasure of your company
at their school

**1. Writing
invitations.**

Thursday, October sixteenth,
from three to six o’clock.

Of course it wasn’t necessary to write the invitations — each girl could have invited her own mother — but the girls felt that if the invitations were written the

mothers would feel that it was being given by all the girls and Miss Ashley.

In giving parties it is necessary to make definite plans of some kind for entertaining the guests and

2. Entertainment. giving them a pleasant time. When a group of people know each other very well they may be depended upon to entertain each other, but when they are not so well acquainted it is well to



FIG. 93. — Miss Ashley enjoyed meeting the girls' mothers.

interest the group in some one thing for a while to get them acquainted and then to let them enjoy themselves in small groups if they choose. How shall we entertain our mothers?

Dorothy Vincent thought that it would be nice to show the new building with its gymnasium, kitchen, and other equipment, their canned fruit, and "Sunnyside." "We've talked about it so much," she said, "that I know they want to see it. And we could serve tea over at Sunnyside."

So it was planned that the girls should act as guides in the new building, showing and explaining all the things of interest. Miss Ashley told the girls to be sure to introduce their mothers to all of the teachers whom they met, for she knew that every teacher would enjoy meeting the guests of the class.

After the guests had inspected the school building, it was planned that they should be taken to the Sunnyside Apartments to see how the girls had helped Miss Ashley and Miss Roberts furnish their new home.

Dorothy's suggestion that tea be served here met with approval. Of course at a real party there must be something to eat. People always seem to feel better acquainted and enjoy talking to each other more when they do it over a cup of tea, chocolate, or something else as simple. After a little planning it was decided that possibly the mothers would like a cup of tea and some good sandwiches as well as anything the girls could prepare and serve, and of course the girls must do every bit of the work. Refreshments served at that time of day did not need to be very elaborate since the guests would have dinner a few hours later. Simple refreshments are always in good taste and express one's hospitality quite as fully as something more elaborate.

Another thing that had to be planned for in connection with the party was the special cleaning of the school kitchen and the addition of the finishing touches at Sunnyside. Everything must of course be made just as attractive as possible when one has guests. Anyone who invites others to her home honors her guests by showing them that she has regarded their coming as a pleasurable event and has tried to make her home attractive to receive them. Some special cleaning may need to be done and the

3. What to serve.

4. Making the house attractive.

house is often given an unusually attractive air by the addition of a few flowers.

Miss Ashley said that the extending of hospitality is one of the pleasures made possible by having a home, and that having guests to share some of the good times is one of the happy events in every home.

A day or two before the party the girls learned how to make sandwiches and tea in order to be able to prepare the refreshments by themselves when their mothers visited the apartment.

II. Learning to make sandwiches.

Miss Ashley was glad that the girls wanted everything to be attractive and gave them a great many suggestions which they used later at school and in their homes. Sandwiches are used for so many different occasions that it is quite worth while to know how to prepare several kinds.

For parties or occasions where sociability is a greater consideration than food values, small, dainty sandwiches are sufficient to serve, but when the sandwich is to be a part of a regular meal a more substantial one is more satisfactory.

Ordinarily, sandwiches are made of bread, which should be at least a day old, so that it will cut well.

1. Materials to be used. White, brown, Graham, or rye bread may be used, according to one's likes. Sometimes two kinds of bread are combined. Crackers and even sweet cakes may be used if a sweet is desired.

The filling for sandwiches varies quite as much as the kinds of bread. Meats of various kinds, such as ham, tongue, or beef, make good fillings. When meat is used it should be very tender and sliced very thin, or it may be ground and flavored in some tasteful way. Hard-cooked eggs, chopped and moistened with salad dressing or a little vinegar or chopped pickle, make a palatable sandwich. Cheese, either plain or mixed with chopped nuts or olives, is a good filling. Various salad mixtures give a pleasing variety. Vegetables, such as lettuce, tomatoes, and cucumbers, are very nice, too. Jellies and jams and even cooked fruit or slices of raw fruit are frequently used and are very appetizing.

In making any kind of sandwich the bread should be cut evenly and the slices should be of uniform thickness. For fancy sandwiches the slices should be cut very thin, about one fourth inch in thickness, but for substantial sandwiches such as find their way into the lunch basket, or for those to be used as a part of the meal, the bread may be cut thicker. In either case the crust may be left on, but if removed, as is frequently done when a very dainty service is desired, all crusts and crumbs should be saved for later use.

If butter is used, it will spread better and go farther if it is first creamed. This may be done by cutting and beating it with a fork or a small wooden spoon. When it is very hard the butter may be put into a warm

2. How to
make sand-
wiches.

bowl, but it should not be melted. The butter should be thinly spread and should extend almost to the edge of the slice of bread but not beyond as is so easily done. The filling should never extend beyond, but there should not be too much of the edge without either butter or filling. Sandwiches are sometimes cut into fancy shapes to make them look attractive, but bread should not be wasted in so doing.



FIG. 94. — Creaming the butter for the sandwiches. Notice how thin the slices of bread have been cut.

Sandwiches are very frequently made several hours before being eaten. They will keep fresh if they are placed in a jar and covered with a damp cloth, or if they are wrapped in paraffin paper. The latter method is especially good when they are to be packed in the lunch basket. Sandwiches with soft fillings, such as tomatoes, cucumbers, and salads, should not be made very long before they are to be eaten.

3. How to
keep sand-
wiches
fresh.

In class each girl made two kinds of sandwiches, one

that was suitable for a party and the other suitable for an outdoor picnic. Which of the following would you choose for such occasions? On the day of their mothers' party the girls made and served plain bread and butter sandwiches and jelly sandwiches in which they used some of the jelly

4. The kind the girls made and served.



FIG. 95. — An attractive way to serve sandwiches.

they had made in the fall. They thought that these would go well with the tea. They made some out of white bread and others out of Graham bread. Some of them were cut into triangles and others into rectangles. When the girls served the sandwiches they put them into a pretty brown basket lined with a doily (Fig. 95).

At the close of the lesson Miss Ashley gave the girls a typewritten sheet of recipes for sandwiches which she thought they might like to make for other parties or picnics or for Sunday-night suppers. Maybe you would like to make some of them some day.

5. Some sandwiches you may like to make.

LETTUCE SANDWICHES

Put fresh, washed, dried, and crisped lettuce leaves and a teaspoonful of salad dressing between thin slices of bread.

EGG SANDWICHES

Chop finely the whites of hard-cooked eggs and force the yolks through a strainer. Mix the yolks and whites, or force the whole egg through a strainer. Use equal parts of egg and cooked dressing. Spread between thin slices of bread.

CHOPPED HAM

Chop fresh, cold, boiled ham finely, and moisten with cooked dressing. To do this measure the quantity of chopped ham and add half that quantity in cooked dressing. Spread between slices of bread.

NUT AND CHEESE

Chop any kind of nuts finely. Add to them the same quantity of cream cheese. Season, if desired, with salt and cayenne pepper. Spread between slices of bread.

In place of cheese, dates or figs could be chopped and used.

OLIVE, PIMENTO, AND CHEESE

Mix finely chopped olives, pimento, and soft cream cheese and use for sandwich filling.

After the sandwiches were made the girls learned how to make tea.

Tea is a very popular beverage in many sections of the country and every girl, even though she does not drink it, should know how to make a pot of good tea.

Tea is made of the leaves obtained from a shrublike plant which grows in China, India, Japan, and the

East Indies (Fig. 96). A very little is produced in South Carolina. The quality of the leaves depends upon the part of the plant from which they are taken, the best coming from the tips of the shoots. The method of curing also makes a difference in the quality of the tea and in its appearance. What is known as green tea is not

III. Tea and how to make it.

1. Where tea comes from.



FIG. 96. — Tea leaves are obtained from a shrub-like plant.

fermented in the curing process, while black tea undergoes a fermentation process and as a result does not contain so much tannin, an ingredient that is undesirable.

In making tea it is well to remember that tea leaves contain three ingredients, theine, the

2. What tea contains.

stimulant which is readily soluble in boiling water, volatile oils, which give it its pleasant flavor, and tannin, an undesirable ingredient which is dissolved out when the leaves are boiled or when they stand a long time in very hot water. Can you draw any conclusions from this statement? Anyone can readily see that in making tea boiling water (Fig. 97) should be poured on the tea leaves but that the tea should not be allowed to boil. A good plan

3. How to make tea.

is to steep the tea from three to five minutes, letting it stand where it will keep hot, and then either to remove the leaves or to pour the tea from the leaves into another hot teapot. A tea ball is sometimes used and is a convenience in removing the leaves. The teapot should be made of earthenware, porcelain, or silver, never of tin.



FIG. 97. — When making tea be sure to use boiling water.

Sometimes a tea cozy is used to keep the tea hot.

It is quite important that the teapot be kept perfectly clean. It should be emptied after each using and should be thoroughly washed and wiped dry. Brown rings or sediment should never be seen on the inside of a teapot.

Tea should not be bought in too great quantities for the family and should be stored in a closely covered jar or canister. It should never be allowed to stand around on the cupboard shelves in a paper bag.

RECIPE FOR MAKING TEA

Scald the teapot with boiling water. Put in a teaspoonful of tea for each cup. Pour over the leaves boiling water and allow to steep for from three to five minutes.

ICED TEA

Iced tea is best when freshly made tea is poured over ice, but it is frequently made by allowing the tea to cool and then chilling with ice.

Other drinks are made by adding fruit juices to tea. Tea lemonade and tea punch are refreshing drinks. Tea is served with sugar and cream or with sugar and lemon. Many people like it plain.

On the day of the party it was necessary to do some careful planning in order that all would be in readiness for the guests. The class was divided into groups. One group remained at the school kitchen to greet the mothers and to act as ^{IV. The day of the party.} hostesses there; the other group went to the apartment.

The group at the school kitchen prepared the sandwiches and later one of the girls carried them over to the apartment. The kitchen was new and shining and had only to be put in order.

The girls who went to the apartment wiped the floors with the dustless mop, dusted all the furniture well, arranged the bitter sweet which Miss Roberts had brought in from the country, and got everything ready for serving the tea. They arranged the table as you see in the accompanying picture (Fig. 98). All was very simple but very pleasing in effect.

Later one of the girls answered the door bell, two others poured the tea, two served in the kitchen, arrang-

ing the sandwiches, making tea, and washing the plates and cups, while the other explained the work that had been done.

While the mothers were at the school Miss Ashley and the principal told them about the work that the various classes were doing. They explained why household arts was being taught and told of the many ways in which the home and the school could work together.

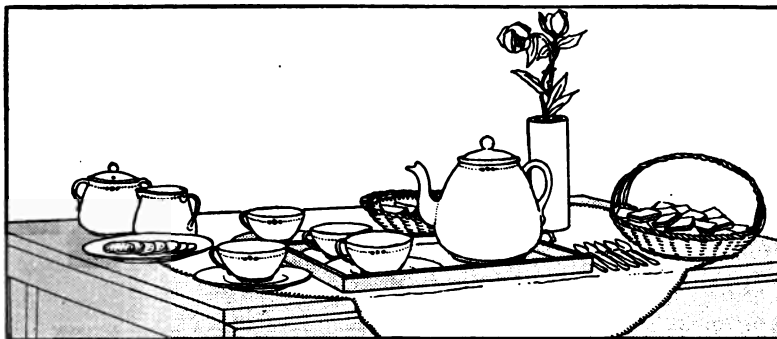


FIG. 98. — The tea table as the girls arranged it.

The mothers were very much interested and one of them was heard to say to another, "Don't you wish that we could have learned some of these things when we were in school? What a lot of mistakes we could have avoided."

After the guests had gone it was too late to put everything in order, so Miss Ashley told the girls that they could come the next day and give the house a thorough weekly cleaning.

SUGGESTIONS FOR REVIEW

1. What special day do you celebrate at your school?
2. Plan to invite and entertain your mothers in your school-room some day.
3. Get your English teacher to help you write the invitations, and have the refreshments prepared in your cooking class.
4. What anniversaries do you celebrate in your home? Could you plan the refreshments and serve them? Ask your teacher to give you some suggestions.

LESSON 14

THE WEEKLY CLEANING AT SUNNYSIDE

Friday was cleaning day at Sunnyside and every week a group of girls went to the apartment to clean. This lesson tells how they cleaned bedrooms, living room, and dining room.

When the "cleaning brigade," as the Sunnysiders enjoyed calling themselves when they had on their colored aprons and caps, entered the apartment this time they found it in a very different condition from the day when they went over to help get the rooms ready for occupancy. Now a small family had been living here for a few weeks and a company of over thirty people had been in the day before.

In spite of the fact that Miss Ashley and Miss Roberts were very careful people they found that a great deal of dust had accumulated. Miss Ashley said that it was impossible in the city, with so much wear and tear and traffic on the streets, not to have some of the resulting dust and dirt

**I. The
need for
a weekly
cleaning.**

in the house. The windows must be opened frequently during the day and left open during the night, and of course the dust comes in. People coming into the house bring in a great deal of dust, and there is always more or less shaken from clothing. It seems to come from everywhere and must be removed.

One can never tell just what the dust in the house is made of. As it blows in from the street it may carry with it fine particles of the stone and brick of the streets and various kinds of decaying material that may have been ground to powder. Sometimes the dust contains disease germs that human beings may have distributed. It is difficult to tell just what it may contain and anyhow it is unsightly and no one wants it around.

1. Dust and dirt are sometimes dangerous.

One day Miss Ashley asked Mr. Lockman, the science teacher, to make a dust garden for his classes. That was a queer kind of garden, the girls thought, but they were very much interested when they saw it grow and afterward were always quite willing to remove any dust from furniture. Mr. Lockman poured a quantity of gelatine into some little glass dishes which had been sterilized so that all bacteria had been killed. The girls then exposed the dishes to the dust in the room and in the street and set them away in a warm, dark place to see what would happen. You should have seen the one that they had set on the window! It looked like the picture (Fig. 99), but much worse. This simply proves that there are living things

2. Making a dust garden.

in dust and that there are many different kinds, too. Under the microscope the growths looked like tiny gardens.

Not only must the dust be removed, but the furnishings, decorations, and ornaments must be freshened and put in order every once in a while. Pillow covers and cushions, table runners and dresser scarfs, doilies, and other linens need to be changed; furniture needs to be polished; and unnecessary articles need to be discarded.

2. Other reasons for cleaning.

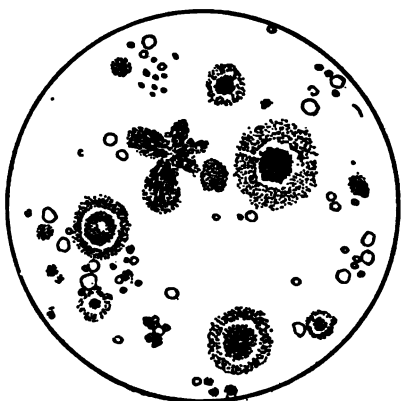


FIG. 99. — A dust garden. Have you ever seen one?

Things may be kept in good condition, but most people find it more satisfactory to set aside some time during the week for cleaning purposes.

On entering the apartment the girls noticed that the windows had been left open,

II. Things the girls noticed as they went into the apartment.

that the beds were airing, and that the closet doors had been left open to air the closets (Fig. 100).

Miss Ashley told them that she always left her room that way for several hours to air. She said that everyone on rising should throw the covers over the foot of the bed, and, if necessary, should keep them from touching the floor by

1. The bed should be aired daily.

placing a chair to help hold them. She said that the under sheet and pad should be loosened and shaken, and every other day the mattress should be turned. During the night when one is asleep much waste is passed from the body into the bed clothing and it is very necessary to air the nightgown, sheets, and covers thoroughly every day. If possible, the sun should be

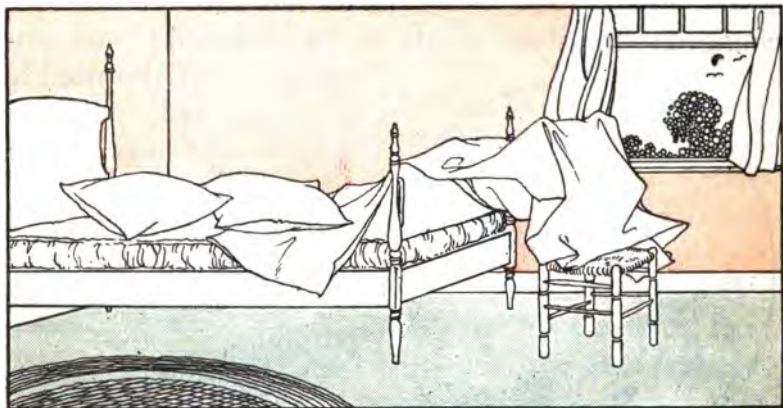


FIG. 100. — The bed should be well aired every day.

allowed to shine in during some part of the day. Sunshine is a great purifier and helps to keep things clean.

Miss Ashley said that she did not like the idea of exposing bedding in the front windows of the apartment because it presented an unattractive appearance; it was better, she thought, to draw the bedding near the window.

Fresh sheets and pillow cases were to be put on the

beds each Friday. The under sheet was to be removed and replaced by the upper, and a fresh upper sheet used. When the fresh pillow case was put on, the girls were careful first to shake up the pillow and then to see that the corners of the pillow fitted into the corners of the case (Fig. 101).

The girls thought that Miss Ashley's room was the prettiest one in the apartment, and each one enjoyed working in it, so they took turns different weeks and each had a chance. Constance did it one week while Dorothy cleaned Miss

2. Fresh
linen.

III. Clean-
ing the
bedrooms.

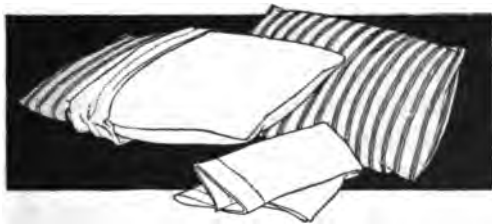


FIG. 101. — Be careful to see that the corners of the pillow fit into the corners of the case.

Roberts' room. They made the beds first. It took both of them to lift and turn the mattresses. They wiped the dust from the springs and bedsteads and brushed the mattresses with a whisk broom. Miss Ashley said that it was not necessary to do this every week but that many people too often forgot it. Each girl then made her bed according to the directions given the class previously.

They then wiped the dust from all the articles they found on the dressers and study tables and placed them on the beds, covering the whole with some large cloths made especially for the purpose.

They used the whisk broom to remove the lint from the wicker chair and its tufted cushion. They ran the vacuum cleaner over the rugs, rolled them, and laid them aside. The lint and other refuse on the floor was swept up with the long-handled brush on to a paper and put with the other waste to go to the furnace. Then the dustless mop was used on the floor. A soft cloth was used for dusting. Nothing was forgotten; the windows and mirror, the dressers, tables, and chairs, each had full attention. The girls remembered even to dust behind the picture frames, as all good cleaners should do. "Let's give the dressers and tables an extra shine," said Constance, as she poured a little furniture polish on to a soft cloth and began to rub the top of the dresser vigorously. With everything clean it was not difficult to put things into place. A fresh cover was put on the dresser, all articles were replaced, the shades adjusted, and their work was done. They folded the soiled linen and put it into the clothes hamper.

When Miss Ashley saw how well Constance and Dorothy had cleaned her bedroom and Miss Roberts', she was interested to know how they cared for their own rooms. After a little talk the girls decided that they would take entire care of their own rooms and record the work in their "home work" book. Every girl in the seventh or eighth grade should be able to give the necessary daily and weekly care to any room in the house and relieve her mother of some of the responsibility.

IV. How
do you
care for
your bed-
room?

Care in hanging up garments and in keeping bureau drawers in an orderly condition lightens the work in the home and a thoughtful girl will not go off to school in the morning and expect someone else to pick things up after her. The habit of putting things where they belong after use is a very helpful one to form. One always knows where to look for them and it saves a second handling of materials.

Did you open your window and air your nightgown and bed while you were at breakfast? Did you put your clothing away carefully? Would you be proud to have someone look in your upper bureau drawer or into your clothes closet?

"Your living room isn't so hard to clean and to keep clean as ours," said Natalie as she wiped the dust from the few ornaments and books and placed them on the dining room table and covered them. "We have so many things on the table

V. Caring
for the
living
room.

and shelves that it takes me a long time to dust them, and our chairs are so heavy to move and the carpet hard to sweep. Even mother is tired out after cleaning day."

Miss Ashley referred to those days when the girls chose the furniture and furnishings for Sunnyside and reminded them again that it is

1. How
may the
work be
lightened?

very necessary when selecting chairs and tables and other things for the home to think of the time and energy that will be required to keep them clean. It is indeed hard work to move cumbersome pieces of furniture and to clean when there are knickknacks and numerous pieces

of bric-a-brac to handle, and one should be careful not to have too many of such things around. One way to lighten the work on cleaning days is not to have too many and too difficult things to clean, and another way is to have some of the labor-saving devices that are found on the market.

Carpets are fast going out of style, but rugs of all kinds need careful cleaning. The broom, our old friend, raises a great deal of dust even though one is very careful. Many women use carpet sweepers, which are a help but are not particularly efficient. They answer for the daily cleaning

2. Some
labor
savers.

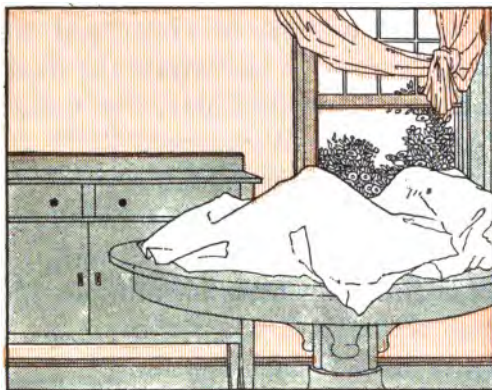


FIG. 102.— All small articles should be dusted and covered while the rest of the room is being cleaned.

but every once in a while a more thorough cleaning is necessary. When a carpet sweeper is used it should be properly cared for. All dust, lint, and hair should be removed and the sweeper should be put away clean. No wonder many of them do

not do good work when the brushes are covered with hair and lint! In what condition did you leave your carpet sweeper when you last used it?

A vacuum cleaner is indeed a labor saver (Fig. 103). There are many kinds on the market which may be run by hand or by electricity. The dust may be taken from all kinds of carpets, rugs, hangings, upholstering, cushions, mattresses, and even from curtains and walls. When the cleaner is run the dust is sucked up into a bag and can later be disposed of.

Miss Ashley told the girls that she and Mrs. Edwards, who lived in the apartment below, bought one together to reduce the expense, and that they each used it on certain days of the week. Sometimes they rented it to their neighbors for a small sum.

Long-handled brushes with soft bristles are good for cleaning the walls, picture moldings, the space above the doors and windows, and the like. Miss Ashley's girls sometimes covered a broom with a cotton flannel bag and wiped the dust from the walls. (See Fig. 91.)

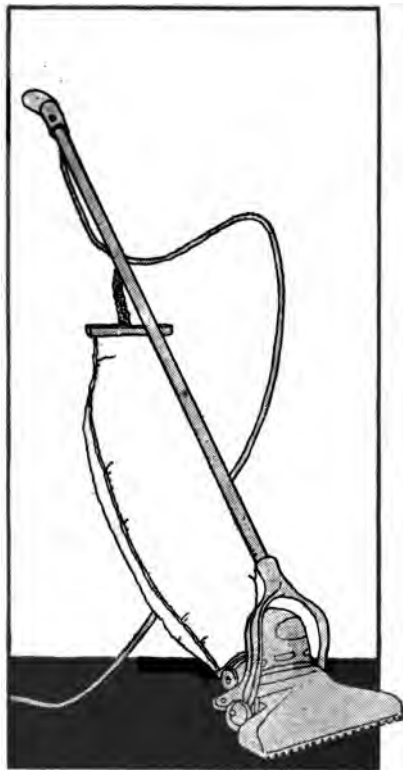


FIG. 103. — A vacuum cleaner is a labor saver.

The girls rather enjoyed getting to work, for they were very well equipped for it. Their dust cloths were soft and clean, the brushes and vacuum cleaner were a novelty, and all the necessary things were at hand. The walls were not very dusty, but the girls were anxious to try that new wall brush! Miss Ashley said that walls, windows, picture frames, and all ornaments should be cared for first. Next the cushions were cleaned. Had there been a yard or a porch these would have been taken outdoors, but in an apartment the dust must simply be collected as best one can. It is not right for anyone to shake a dust cloth or rug or mop out of the window on to the sidewalk below. This is another reason for using a vacuum cleaner—the dust and dirt can be collected and destroyed. After the first general removal of loose dust and dirt from everything the vacuum cleaner was used; rugs were cleaned first on one side and then on the other. The floor was wiped with the dustless mop.

3. The order in which the girls worked.

It was not difficult to put things in order when all was clean. Later in the year when the girls cleaned these rooms they learned to re wax the floors and to polish the furniture. There was no reason for doing it to-day, for the floors had just been refinished and the furniture was new and only a careful dusting was necessary. When they waxed the floors later the girls first cleaned them well, removing every particle of dust. Then they put on a thin coating of

4. Waxing floors.

wax, which they had bought for the purpose, and rubbed it in well with a heavy brush that Mrs. Edwards owned. Each member of the class took her turn using the weighted brush. The rubbing was hard work but the many hands made it easy after all.

The girls who were responsible for the dining room did practically the same work that the girls in the living room had done. They had the dining table and sideboard to care for and did not feel that they had finished until the brass tray, Miss Roberts' old candlesticks, and the silver knives, forks, and spoons had been polished. They took these things to the kitchen, where they found the whiting, a box marked rotten stone, ammonia, and some soft cloths. Of course the dish pan, soap, and towels were there, too.

Edith Potter, who was always careful, spread newspapers over the oilcloth on the table to save the work of cleaning up later. The girls cleaned the silver with the whiting by moistening it with a little water, rubbing each piece thoroughly, and allowing it to dry. Then they took cloths and rubbed off the dried whiting, after which they washed the pieces in warm, soapy water. After they had rinsed it in hot water and wiped it with clean towels the silver shone like new. "I'd like to know what made some of those spoons so black," said Natalie, as Miss Ashley appeared. Miss Ashley explained that the "black" on the silver was caused by the sulphur from the eggs which she and Miss Roberts used for breakfast. She added that they tried to use

the same spoons each morning so that all of them would not be tarnished. An application of whiting every few days removed the discoloration.

The extra teaspoons that had been used at the party belonged to Miss Roberts so they were put away in their cases (Fig. 104), which were made of dark gray cotton flannel. Miss Roberts said that she never used white cotton flannel because sulphur might have been used to bleach the cloth and it would in turn tarnish the

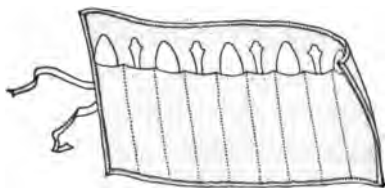


FIG. 104. — Miss Roberts puts her spoons away in a case like this.

spoons. She also said that she was careful never to put matches or rubber bands in the same drawer with the silver. Do you know why? Ask your science teacher. See whether you can find out why silver

tarnishes so quickly in a gas-lighted apartment, and in a house where coal is used in the furnace.

The girls cleaned the brass tray and candlesticks with the rotten stone and oil. They used soft cloths and rubbed very hard. Edith told the girls that she used salt and vinegar at home on her mother's brass teapot, but that she was careful to wash it off with hot soapsuds and then to polish it with whiting to make the shine last longer.

One reason why the girls did not mind the weekly cleaning lessons but enjoyed them was that their cleaning equipment was fresh and clean each time.

Cleaning cloths will not do good work if they are not clean, and the workers cannot be quite so happy. No one enjoys handling dirty, oily "rags," but clean, soft cloths, hemmed for the purpose, cannot be objectionable to anyone. Even cleaning may be dignified, dainty work if one's method of going at it and the materials one uses make it so. Brooms and brushes wear longer if they are first cleaned by thorough shaking and then hung up. Of course the dust and dirt in the bag on the vacuum cleaner must be removed.

VI. Washing the cloths and caring for the brooms and brushes and cleaning materials.

All the cleaning equipment should have a definite place. Every apartment and every house should have a closet built for the purpose of storing these things and every girl, as well as her mother, should know how to care for them.

As the girls washed the dust cloths and tidied the kitchen after their work, the afternoon sun shone through the west windows, giving its cheer to the late autumn afternoon. Fresh air had been coming in through the open windows, and the girls were reminded again of what they had so often heard, that after all two of the best cleansers and purifiers are sunshine and fresh air. Human beings cannot get along without either no matter how much cleaning and scrubbing goes on within the house. The air in the kitchen and living rooms must be kept fresh during the day by opening the

VII. Other cleansers and purifiers.

windows occasionally, and at night the bedroom windows should be opened from the top and the bottom to allow for a circulation of fresh air. For protection

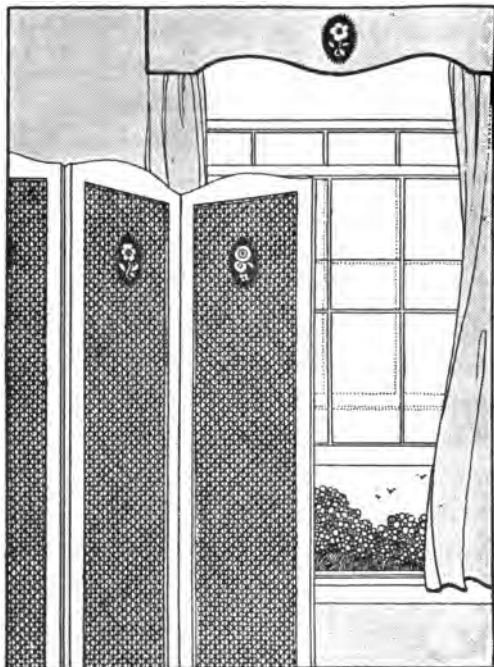


FIG. 105. — Open the window at the top and bottom. A screen may be used in case of draft.

from a draft a screen may be placed in front of the window, a board eight or more inches high fitted to the window may be placed under the lifted sash and a good circulation of air made possible, or a cheesecloth screen may be put in the open space.

When a great deal of dust is likely to come in, a fitted cheesecloth screen is a protection against it.

The cloth will get very soiled and will need to be washed occasionally.

Miss Roberts had such a screen on her bedroom window because the smoke from the chimneys and dust from the court were such a nuisance. When

one looked at the soiled screen its value was easily seen.

When Constance Moore was helping her mother with the dinner dishes that evening she told her how the class had cleaned and ended by saying, "We never go to the apartment without learning something new, and everything Miss Ashley says and does seems so simple and easy that I wonder why some of us did not think of it before."

SUGGESTIONS FOR REVIEW

1. Why should dust and dirt not accumulate in the home?
2. In what condition did you leave your bedroom this morning as you went down to breakfast?
3. What is a dust garden and what does it prove?
4. Tell how to care for and clean a bedroom.
5. How would you clean and put away silver spoons?
6. Name some labor savers and tell why you think they are good.
7. Which room in your home do you give daily care? Weekly care?

LESSON 15

ANOTHER CLEANING LESSON

The kitchen at Sunnyside was small and had to be kept clean and in order. Two of Miss Ashley's girls went over each day and gave it the daily cleaning, and once each week some special cleaning was done.

Of all the rooms in the house there is none that requires more careful and frequent cleaning than the kitchen. Here it is that all the food is handled and

prepared and of course the surroundings must be

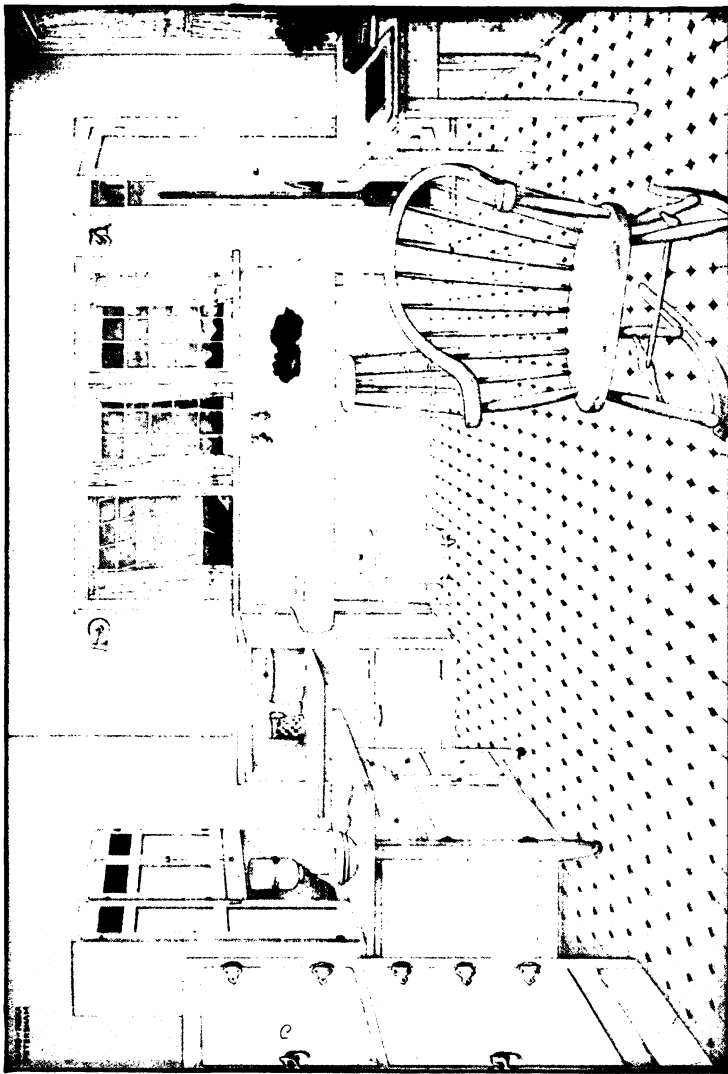
1. The daily cleaning of the kitchen. very sanitary. Then, too, the mother or daughter who looks after the comfort of the family enjoys a clean, attractive place in which to work. When one has three meals

1. The need for it. to prepare, extra baking to do, and dishes to wash three times daily, she wants to have an attractive, pleasant place in which to do it. Mrs. Edwards told the girls one day that she always thought of her kitchen as her workshop and that she kept it in just as good condition for work as Mr. Edwards did his office. She said that she found it much easier to keep it clean by giving it attention each day than to let it go for several days and then have a regular "cleaning up."

Kitchens in apartments are usually smaller than in detached houses and have to be kept in order or it is difficult to do the work easily, and they have to be kept *very* clean or one is likely to be troubled with cockroaches or water bugs, which seem to have a great liking for city houses, and especially for apartments.

Miss Ashley's kitchen was easy to keep clean because she was careful in choosing the wall and the floor finish, the utensils, and the other furnishings. She seemed to have everything necessary for good work but there were no extra unused things standing around to collect dust and to be in the way. If a thing had use, she found a definite place for it; if it were not usable, she disposed

2. Careful planning in furnishing the kitchen saves work.



It would be fun to keep this kitchen clean.

of it as soon as possible. Once having been given a place, all articles could easily be found, for both Miss Ashley and Miss Roberts were too busy not to put things where they belonged. Some people say that they are too busy to put things away but these two women said that they were too busy not to do so. Do you see why ?

Every evening before Miss Ashley and Miss Roberts finished the day's work they put their living room in order so that it would give them a pleasant welcome in the morning. There were always papers and other articles for which they would have no further need, — maybe some nut shells or apple cores in a dish, wrapping paper and twine from new purchases, or bits of thread and scraps from the mending basket. You know how these all accumulate. This waste was taken to the kitchen and later given to the man who made his daily rounds. A large basket was kept in the kitchen for the purpose.

3. Disposal
of garbage
and waste
of all kinds.

All of the waste from the food, such as vegetable parings, bones for which there was no further use, coffee grounds, and tea leaves, were carefully drained, wrapped in paper, and put into the garbage can. Miss Ashley always spread a newspaper on the table when preparing vegetables, fruits, and various other foods, and collected the garbage at once (Fig. 106). This saved a second handling. She was careful not to put anything wet into the can.

She always lined the garbage can with several thicknesses of paper to make it easier to keep clean (Fig. 107). In some cities one is not permitted to wrap garbage in paper and put the bundle into the can. City ordinances determine this and one must be careful to abide by the law.



FIG. 106.— Spread a newspaper on the table when preparing vegetables. It saves work.

The garbage can was one of Miss Ashley's hobbies. She said that there was no excuse for not keeping it sweet and clean, and that no woman was a good housekeeper who neglected this important part of her work.

In cities garbage and waste of all kinds are collected at rather regular hours and one must learn to have things ready when they are called for or they may have to stand in the kitchen all day. This would not be pleasant.

When the empty can is returned, it and the cover should be washed with strong, hot soapsuds or sal soda, rinsed with boiling water, and then should be allowed to air with the cover off; if possible they should be exposed to the sun. Sometimes chloride of lime is used to disinfect the pail further.

If you live in a separate house and have a furnace, much household waste may be burned. Many women drain or even dry the garbage and then burn it in the cook stove, heater, or furnace.

You may remember that one day Natalie Underwood told the class that her mother always cleaned the refrigerator after breakfast and before she washed the dishes. Mrs. Underwood was particular about the refrigerator because she stored in it the milk and butter and much other food. She had a much better and more satisfactory refrigerator than the one in the Sunnyside kitchen. Hers looked like the picture you see in Fig. 108. It was enamel lined and was very easy to keep clean. She

4. The refrigerator needs daily care.

said that she simply wiped off the shelves with a damp cloth every other morning, but that once a week she gave it a good cleaning such as the girls gave Miss Ashley's the day they helped to clean the apartment and settle it (Lesson 12).

She was always careful, too, in putting food away to have the dishes clean and attractive. While cleaning the refrigerator Mrs. Underwood took stock of what



FIG. 107. — Lining the garbage can with paper makes it easy to keep clean.

was on hand and saw to it that left-over food was properly cared for. She always seemed to have a few empty and soiled dishes to add to the breakfast dishes and washed them all at the same time.

When the ice man came Mrs. Underwood insisted on a clean piece of ice. The block was always washed off carefully. This made it easier to keep the ice chamber clean. Then, too, she kept a coarse piece of cloth in the bottom of the ice chamber to collect the deposit that the melting ice made. She said that it was surprising how soiled this cloth became after a few days. Of course it had to be washed and scalded and replaced by a clean one every four or five days.

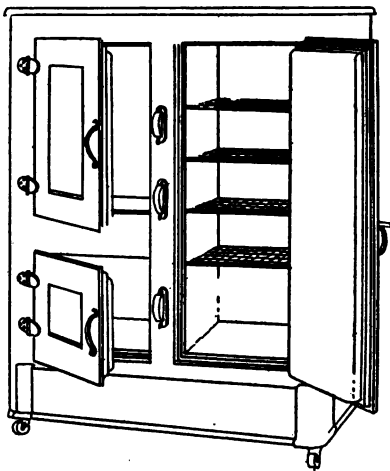


FIG. 108. — Mrs. Underwood's refrigerator was porcelain lined and was easy to keep clean.

As the girls were putting the food back into the refrigerator one morning Natalie surprised them by saying that it made a difference where the milk and butter were placed. She told them that certain parts of the food chamber are cooler than others, — at least the man who sold them their new refrigerator had said so. She couldn't tell why, so the girls decided to ask Mr. Lockman. A few days later they had a lesson which

taught them much about refrigerators that they had not known before.

Mr. Lockman told them that there were many different makes of refrigerators but that the most satisfactory, from the standpoint of keeping

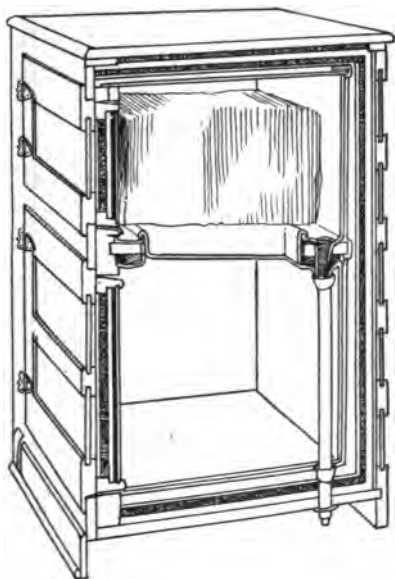


FIG. 109.—The best refrigerators have double walls made of non-conducting materials.

ice and food, was the kind that had double walls

5. Some interesting things about refrigerators.

made of non-conducting materials. He explained about non-conductors and air spaces and showed the class some pictures of good refrigerators and poor ones. Ask your science teacher to explain these things to you. See Fig. 109.

In the best refrigerators, he said, the food closets are lined with a non-absorptive material, such as enamel or porcelain. Linings without seams and those which will not rust or discolor are of course the most desirable. Then he explained about the circulation of air in the refrigerator and gave the class the reason for the difference in temperature in different places. These are the diagrams he used (Fig.

110). They tell their own story, do they not? Can you tell in what part of your refrigerator to put the butter and milk?

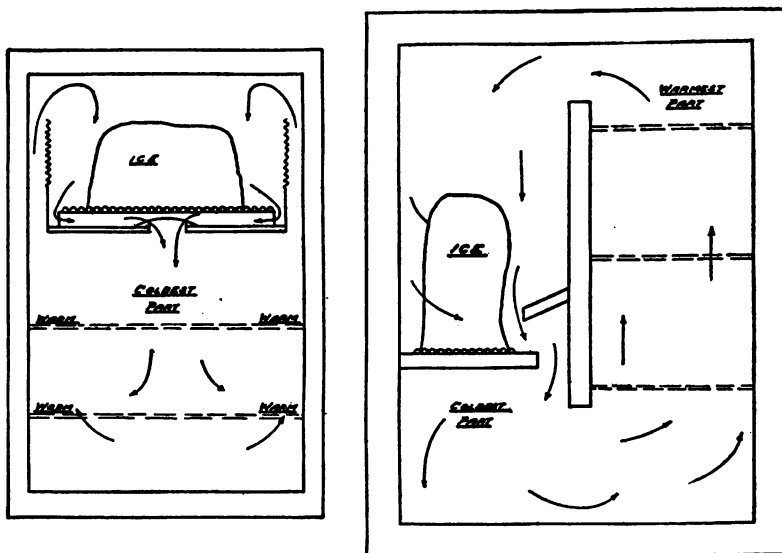


FIG. 110. — Mr. Lockman used these diagrams to explain the circulation of air in two types of refrigerators.

“Now for the gas range. But this won’t be hard. It’s easy to wash this white tray under the burners,” said Edith. “Ours is made of zinc and I don’t like to clean it at all. It is so hard to clean all the creases and corners and even after I work hard it never looks very well.” She proceeded to wash the tray and the top of the stove, using warm, soapy water and a cleaning cloth. Those who had used the

6. Cleaning
the gas
range.

stove had been careful; either nothing had been spilled or it had been wiped up immediately. Miss Ashley kept a bag near the stove and put all kinds of soft paper and soft cloth into it to be used for just such purposes.

After the refrigerator and the stove had been attended to the girls began to wash the dishes. Edith, who you remember had said that she "hated" dish-washing, confided to Natalie that now she

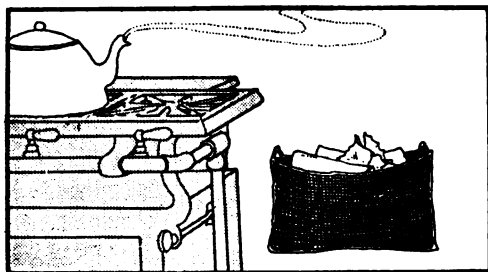


FIG 111. — Keep soft paper in a convenient place and use it for cleaning purposes.

7. Washing the dishes.
 didn't think it was "half bad." "In fact I rather like to do it," she said, "when the dishes are scraped clean and put into nice piles; and when the water is hot and the cloths clean. And don't

you think it is interesting to know that we scald them for the same reason that we sterilized the jars when we canned fruit?" she added.

They made quick work of the dishes, for they had had practice at school, and, too, Miss Ashley had done at home what she had told the girls to do. Water had been poured into a cooking utensil, that had evidently been used for making a creamed dish of some kind, a dish that had been used for batter was soaking, the

milk dishes had been rinsed, dishes of a kind were stacked together, and the knives, forks, and spoons were in separate piles.

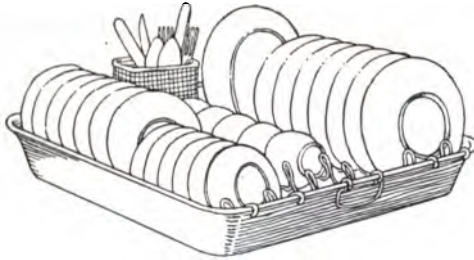


FIG. 112. — Why not scald the dishes and leave them in the rack to dry?

The dishes were washed in clean, soapy water in this order: first the glasses, then the silver, the cups and saucers, plates, platter, and serving dishes, and last of

all the kitchen utensils. Nor did the girls forget to scour the kitchen knives and forks with the bath brick that was kept on the shelf near by. Many housekeepers find it more desirable to wash all the kitchen utensils first. A really good worker will keep the cooking dishes washed up as she prepares the meal.

Natalie wiped the dishes this morning but Miss Ashley had told

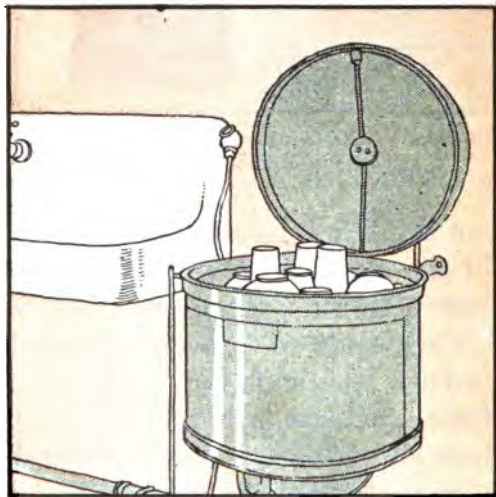


FIG. 113. — Miss Ashley's aunt has a small electric dishwashing machine like this.

them they might arrange them in the dish rack (Fig. 112), pour scalding hot water over them, and leave them to dry. She said that this was a very satisfactory way,



FIG. 114.—Natalie does not have to stoop when she uses the long-handled dust-pan.

especially when one had many dishes to wash and much other work to do. Scalding hot water is much more desirable than doubtful dish towels! She also told the girls one day about a dishwashing machine used by her aunt, who had a large family to cook for (Fig. 113). Edith washed out the towels, scalded them and hung them to dry, and then cleaned the sink and faucets. The last thing she did was to pour some hot water down the drain pipe. Natalie swept the floor and tried not to raise the dust. She took

8. The floor must be swept.

short strokes and did not raise the broom very far from the floor. She had seen some pictures in a book called "The Home and the Family"¹ and wondered whether she held the broom as that girl had.

¹The Home and the Family. Kinne and Cooley.

The morning kitchen work finished, the girls watered the red geraniums in the window and went back to their schoolroom.

There are parts of the house which do not require daily nor yet weekly cleaning but rather occasional cleaning. Storage places, cellars, attics, and closets belong to this class. They need to be kept clean and in good order but the amount of cleaning given depends upon their use. Dust and dirt should not be allowed to accumulate anywhere. The cellar is really a very important room in the house and should be kept clean and dry and free from all objectionable odors.

1. The cellar.

The air from the cellar rises to the other parts of the house and for this reason should not be contaminated in any way.

Fruits and vegetables if stored in the cellar should be placed in a separate room and under no circumstances should they be allowed to decay there. The furnace room should be kept as clean as possible, since dust and dirt from it may rise to other parts of the house and cause much extra work.

The cellar stairs should be kept clean ; if used daily, they may require frequent scrubbing ; the cellar floor should be swept as necessary. Cobwebs should not be allowed to accumulate in the cellar.

Each spring and fall the walls should be wiped down with a brush or cloth tied to a broom, and in the spring it is well to whitewash the walls.

Air and sunshine should be given a chance to enter (Fig. 115). The windows and the outside door should be opened and a circulation of air provided if possible. The cellar windows and doors should be screened in the summer.

Miss Ashley had no cellar so the girls had none to clean, but they talked over some of the problems con-

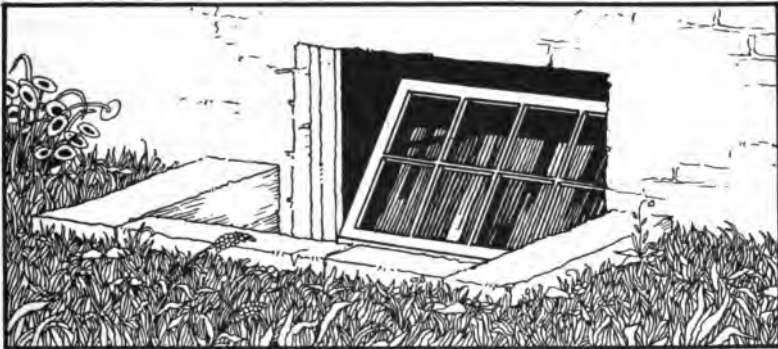


FIG. 115. — Fresh air and sunshine should be given a chance to enter the cellar.

nected with it and were interested in learning about this room, too.

Another room that is absent in apartments but which is usually found in separate houses is the attic. If you have ever played in this part of the house and have dressed up in your grandmother's wedding clothes, and have looked time and again at the interesting things in the old trunks and boxes, you will feel sorry for the girl who has never had a chance to spend rainy days in such a charming place (Fig. 116).

But in spite of its interest and charm it will get dusty and dirty and a good housekeeper must keep it clean. Everything stored in the attic should be well protected from dust. Walls, windows, and floors should be kept clean and the place should be aired frequently. One should be very careful about accumulating things that are not needed and which may never serve a purpose.

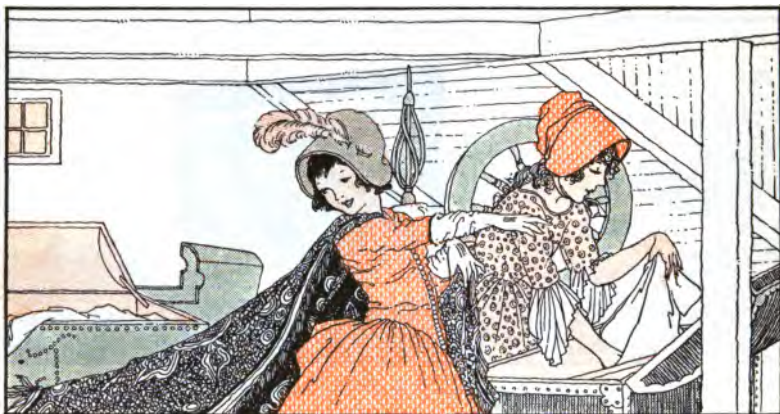


FIG. 116. — The attic is a charming place on rainy days. Have you ever dressed up in your grandmother's clothes?

The time and strength required to care for these things may be more worth while than the things themselves.

Every housekeeper enjoys numerous closets in which to store things, and if she is a *good* housekeeper enjoys equally well having them in good condition.

3. Closets.

Like other rooms in the house they should be kept in order as used, but they require especial attention at times. Their contents should be removed and aired ;

shelves and floors should be wiped with a damp cloth and thoroughly dried; old paper should be replaced by clean, fresh pieces. While cleaning, one should take the opportunity of sorting out and discarding unnecessary things.

Occasional fumigation of clothes closets is advisable because of the usual lack of circulation of air. Clothing which is worn in the home, on the street, or at business cannot be kept thoroughly sanitary, and it follows that the place in which it is stored or hung must become contaminated and needs thorough cleaning.

SUGGESTIONS FOR REVIEW

1. In what order do you do the kitchen work after breakfast?
2. Why does the kitchen require daily cleaning?
3. How could you make your kitchen easier to keep clean?
4. What attention should one give the garbage pail?
5. Make a plan of your refrigerator and trace the currents of air. What is the coldest place in it?
6. Why did Edith and Natalie like dishwashing at Sunnyside?
7. What care did you give the dish towels when you wiped the dishes this morning?
8. What are some essential things to consider in connection with the cellar? The attic?
9. Why is it especially necessary to clean clothes closets? How may it be done?

LESSON 16

LAUNDRY LESSONS AT SUNNYSIDE

How shall the washing be done ?

Tuesday is "wash day"! The girls who went to Sunnyside Tuesdays knew what their work was to be. On this day the kitchen towels, napkins, doilies, caps, and housework aprons that the girls had used in their lessons during the week were washed. Occasionally cushion covers, pillow cases, and curtains found their way into the soiled clothes hamper. Miss Ashley was careful not to have too many articles at any one time but tried to plan so that the girls would learn how to sort the clothes and to launder the various kinds of clothing used in their homes.

Miss Ashley regarded laundering as one of the most important of the household arts, and when the girls

1. Laundering is an important household art.

saw how easily she did it and how clean and tidy she kept herself and the kitchen while working they got a different notion about washing clothes than many of them had had.

Miss Ashley said that she was glad to know how to launder clothes for it was not always possible to get someone else to do the work satisfactorily, and

1. Why should one know how to wash and iron?

then, too, since she knew how she could show anyone who came in to help her how she liked to have it done. It is not wise for a housekeeper to depend entirely upon others for

anything so important as clean clothing. Do you

know why clean clothing is so important? How do you feel after you have taken a bath and put on clean underwear and a fresh, crisp dress or apron? No doubt everyone who puts on clean clothing feels the same sense of respect for herself that you do. In what ways do you think clean clothes contribute to your health? And how does the laundering of clothing contribute to the life of the garment? How do you feel about washing and wiping dishes when the towels are clean and white? About sitting down to a table with a clean cloth on it? About clean sheets and pillow cases on your bed? How much more pleasure do you take in the living room after the curtains and pillow covers have been laundered than before? Can you not do your part in providing these satisfactions for yourself and your family?

And now how shall the washing be done? Since the clothes hamper might contain a variety of articles the girls learned how to go ahead in case Miss Ashley should not be there to tell them. These are some of the things the Sunnysiders learned. All the clothing to be washed should be collected and sorted into several piles. The table linen and least soiled hand towels, muslin underwear, knit cotton underwear, handkerchiefs, woolen underwear, colored clothing, and stockings should be placed in separate piles.

Torn or worn garments should be mended and stains should be removed. (See page 46.)

2. Why are clean clothes necessary?

II. How shall the washing be done?

1. Collect and sort.

2. Mend, and remove stains.

White cotton clothes may be soaked for several hours in warm, soapy water to loosen the fibers and make the dirt easier to remove. Bed linen and body linen may be soaked in the same tub, the bed linen to be put on top. Soiled portions of garments should be rubbed with soap and should be folded in. Handkerchiefs not much soiled may also be put into this tub. Handkerchiefs used during a cold should be soaked in cold water and should be washed by themselves. Woolen clothes and colored clothes should not be soaked.

**3. White
cotton
clothes
may be
soaked.**

After they have been soaked the clothes should be taken from the water. Much of the dirt may be removed by careful rubbing and rinsing in this water. They should then be washed in clean, soapy, hot water, either by machine or by hand on a board, rinsed in fresh, soapy water, and then boiled for about five minutes in water to which soap has been added. Two rinsings should follow, the last should be in cold water to which a little bluing has been added. After the last rinsing the clothes are ready to be starched, or if that is not necessary, to be hung on the line. (For further instruction see page 50.)

**4. Order
of washing.**

The washing of colored clothes differs very much from the washing of white clothes. It is not so easy to get colored clothes clean and yet retain the original color. Sometimes it may be wise to "set" the color in a garment by soaking it in a pail of water to which a cupful of salt has been added.

**5. Washing
colored
clothes.**

The salty water should be rinsed out before the garment is washed. Strong soap should not be used for washing colored clothes and the water should never be very hot. All clothes should be very thoroughly rinsed. Starch when used should be rubbed into the fabric and none should be allowed to remain on the surface. Colored clothes should be hung in the shade to dry. It is well to iron them on the wrong side.

The Sunnysiders learned how to wash and iron their gingham housework aprons and took pride in the fact that the gingham remained clear and new looking.

The washing of woolen garments must be done very carefully. The Sunnysiders learned how to launder their sweaters one day in the school kitchen. Read the next lesson to find out how they did it.

6. Washing
woolen
garments.

One day when Constance and Dorothy were to be the laundresses they found only two white silk waists in the hamper with the following directions which Miss Ashley had left. “Wash these silk waists in warm, soapy water. Use the soap solution to make the suds. Do not rub hard or twist in the wringing. Fold lengthwise, place between folds of a towel, and put through the wringer. Be sure to rinse very thoroughly in two or three warm waters. Wrap in a bath towel while damp to absorb some of the water. Iron on the wrong side while still damp but not wet, with a moderately hot iron.”

7. Washing
silk.

The girls enjoyed doing work of this kind at school and many of them added laundry work to their "home work" report cards.

Laundry work at school and in the apartment was

III. Saving time and labor. not hard.

The suction wash machine and the wringer made it possible for the girls to do things easily. The laundry tubs in the apartment were a little too high for some of the shorter girls so a broad stool a few inches

high was made for them to stand on (Fig. 117).

The clean ironing board and the electric iron made the ironing a pleasure.



FIG. 117.—Are your laundry tubs the right height? Notice the broad stool Miss Ashley had made.

SUGGESTIONS FOR STUDY AND REVIEW

1. Do you think laundering an important subject of study? Why?
2. What directions in regard to washing clothes could you give to one who knew very little about it?

3. Compare the washing of white with that of colored cotton goods.
4. Why are clothes boiled?
5. Recall what you have learned about silk and try to discover the reason for washing the silk waists as Miss Ashley directed.

LESSON 17

HELPING THE GIRLS' RECREATION CLUB

Laundering sweaters.

Much of the laundry work was done in the apartment, but when some of the girls who belonged to the Recreation Club asked Miss Ashley to let them wash their sweaters, she suggested that they do it in the school kitchen some Friday in order to allow them to dry over the week-end without being in anyone's way.

The morning the girls were to launder the sweaters Miss Ashley showed them two little woolen shirts



FIG. 118. — This shirt was washed with care.

which when purchased had been the same size. One looked like

I. Woolen garments should be washed carefully.

Fig. 118; the other like Fig. 119. Why this difference? Mrs. Edwards, to whose baby the garments belonged, said that the entire difference was due to the way in which the

garments had been washed, and that had she known more about the characteristics of wool and woolen

materials before she washed them she need not have replaced the hard, shrunken little shirt with a new one.

“What should Mrs. Edwards have known before washing it?” asked Natalie. The girls recalled what they had learned in their study of textiles and decided that some of this knowledge would have helped Mrs. Edwards. She might have handled the garment more carefully had she known that the

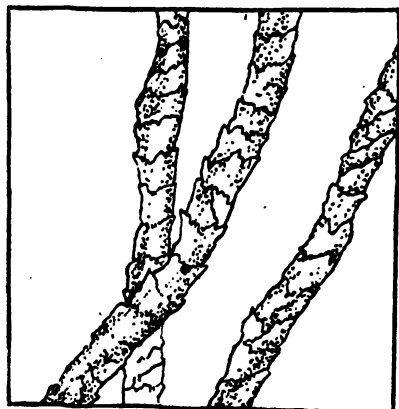


FIG. 120. — Wool fiber. Notice the tiny overlapping scales.



FIG. 119. — Careless washing caused this shirt to shrink.

wool fiber is a little tube on the outside of which are tiny overlapping scales which open outward when the wool is wet (Fig. 120). She might not have rubbed it on the board had she known that when a woolen garment is rubbed or twisted, the scales on the fibers lying next to each other interlock or catch on one another, causing a

shrinking or felting of the wool.

Not knowing these things Mrs. Edwards rubbed, or

perhaps boiled, the woolen shirt and in doing so ruined it. Wool is an animal fiber and cannot stand intense heat or intense cold without undergoing change. For this reason the water in which it is washed and rinsed should be lukewarm, never above 110° F.

Maybe, too, Mrs. Edwards did not know that the soft feel of wool is due to a certain amount of oil that it contains and that strong soap or alkaline material removes too much of the oil and makes the wool dry and hard. You know how harsh and dry the hair on your head becomes if too strong soap or too much soap is used when washing it. Miss



FIG. 121.—Use soap solution when washing woolen garments.

Ashley said that it was not good to use strong soap or to rub soap directly on a woolen garment but that instead a soap solution made of white soap should be put into the water. She gave the girls this recipe, which she had obtained in a laundering class at college :

SOAP SOLUTION

- | | |
|------------------------|--------------------------------|
| 1 large bar Ivory soap | 2 tablespoonfuls borax |
| 3 quarts cold water | $\frac{1}{2}$ cup wood alcohol |

Shave the soap into the cold water and heat slowly until the soap is dissolved. When cold, add the borax and alcohol.

Nearly all these girls had studied about the wool fiber in other classes but did not realize until now that

some of the facts they had learned could be put to such practical use as in washing their sweaters.

They did not want their sweaters to shrink and get hard so decided that they would profit by Mrs.

III. Sug- Edwards' experience and be careful: (1) to
gestions have the water lukewarm; (2) to use a
for wash- soap solution in the water; (3) to avoid all
ing woolen soap solution in the water; (3) to avoid all
sweaters. rubbing and twisting; and (4) to dry the
sweaters where they would get neither too warm
nor too cold.

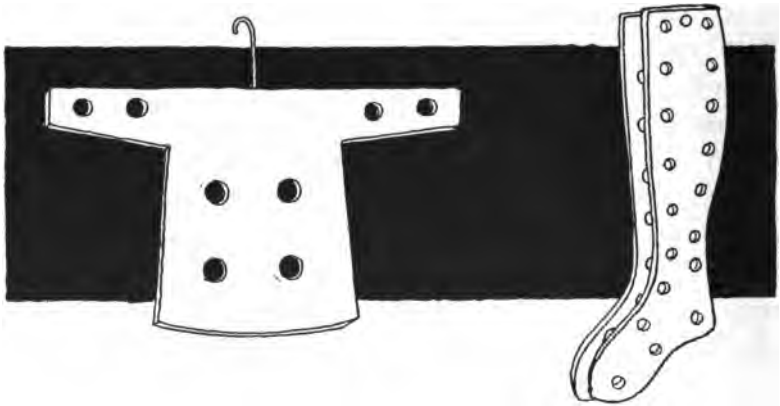


FIG. 122. — Wooden form for baby's shirt and stockings.

Miss Ashley reminded the girls that in washing knitted woolen garments or large, heavy, woven ones care should be taken to preserve the shape. Wool holds a great deal of water even when as much as possible is squeezed out, and this added weight may

easily stretch the garment out of shape unless some care is taken.

Mrs. Edwards used a wooden form for the baby's shirts and stockings (Fig. 122). The Sunnysiders had no forms for their sweaters so decided to measure them carefully before wetting them, and after they were washed to lay them on a flat, padded surface, stretch and pat them into proper shape and size, and allow them to dry.

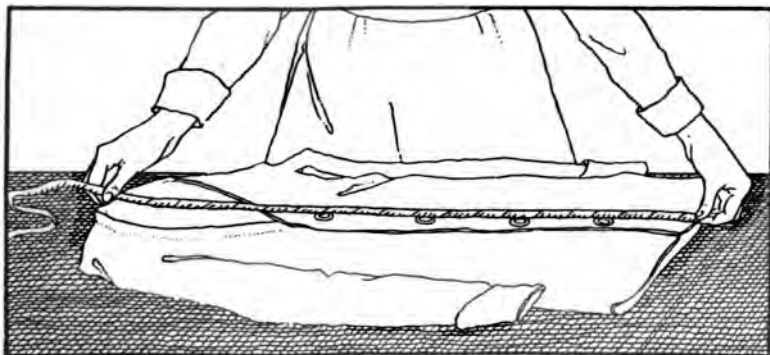


FIG. 123. — The Sunnysiders measured their sweaters before washing them.

After discussing methods of work and the reasons therefor the girls began. They brushed the garments first to remove any loose dust, then took and *recorded* the measures of the several sweaters that were to be washed. They measured the length of the front and of the back; the width of the front and of the back seven inches below the shoulder seam; and the length of the shoulder and of the sleeve (Fig. 123).

IV. The girls measure their sweaters before washing them.

Since the sweaters were not to be rubbed a suction hand washer was used to do the work (Fig. 124). This washer cleaned them by forcing the soapy water through and carrying out the dirt. The girls changed the water, adding a little soap solution as soon as it became much discolored, and continuing to do so until the last water remained clean. They were careful not to lift or to pull the garments. To remove much of the

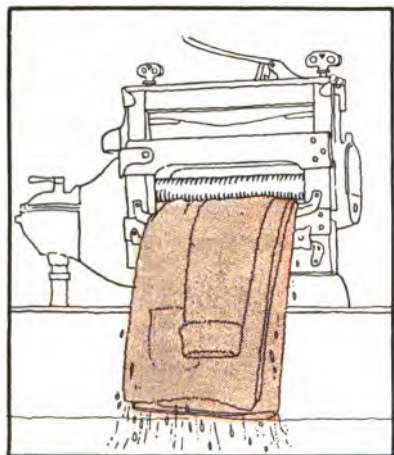


FIG. 125.—The sweaters were put through a loosely adjusted wringer.

the moisture. The girls stretched the sweaters into shape, measuring carefully, and left them over Satur-

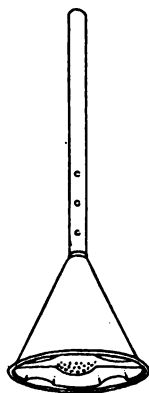


FIG. 124.—A suction hand washer is a good device for the laundry.

water the sweaters were folded lengthwise, buttons inside, and put through a loosely adjusted wringer. Do you know why the water was not twisted out?

The sweaters were then laid on the sewing tables to dry. The tables had been padded with sheets and towels to protect them and to absorb

VI. Drying the sweaters.

to dry. The tables had been padded with

day and Sunday to dry. When they returned Monday morning they were rewarded for their work by having sweaters which they all decided looked as good as new.

SUGGESTIONS FOR STUDY AND REVIEW

1. Ask your teacher to prepare some microscope slides of wool fibers. Notice the little scales or serrations.
2. Of what advantages are these scales in manufacturing woolen goods? How do they help make wool a warm textile material?
3. What makes woolen goods shrink? Why?
4. Given the baby's woolen shirts to wash, how would you do it?
5. Suggest a way of keeping the original size of woolen blankets when washed.
6. How does a suction wash machine remove dirt?



CHAPTER IV

SOME SPECIAL OCCASIONS AT THE ELLEN H. RICHARDS SCHOOL

In every school anniversaries, festivals, or events of local interest are celebrated and call for the services of various groups to make them successful. The teachers and pupils of the Ellen H. Richards School prepared for and enjoyed many such occasions together, and the household arts classes found that they could always do their share to help. Miss Ashley said that the girls seemed to work harder and learn more while getting ready for these days than at any other time. She knew why. Do you ?

LESSON 18

BAKING BREAD FOR THE LEAGUE FAIR

This lesson was an interesting one for the girls were eager to increase their funds.

When the Sunnysiders were asked by the Girls' League what they would do to help at the fair to be given in early December, they thought with pride of

the jellies and jams they had already prepared. They decided that they could increase their funds still more by offering other cooked foods for sale just as the girls in Pleasant Valley had done. Natalie said that the Pleasant Valley girls never had any difficulty in selling home-made bread and rolls, so the Sunnysiders felt justified in asking Miss Ashley whether they, too, might learn to make bread and offer it for sale.

“Do you think we can do it?” questioned Margaret. “Any eighth-grade girl can learn to make good bread if she really wants to,” was Miss Ashley’s answer.

Would you like to know how they did it?

Bread lessons at school are not always easy to arrange, for one lesson period of an hour and a half is never a long enough time in which to finish the entire process. Miss Ashley asked the principal to let the class have the time of two lessons, or a “double lesson,” on one of the bread-making days, so that each girl could bake the bread she had mixed. A “double lesson” sounds very long but it really isn’t when there are so many interesting things to study about while the bread is rising and baking.

**I. Plan-
ning the
bread-
making
lessons at
school.**

Miss Ashley told the girls that there are many different kinds of bread due to different kinds of materials and ways of making, and that after they knew how to make plain white bread and understood the reasons for doing certain things it would be easy to make various kinds.

**II. How
to make
bread.**

The Sunnysiders used the following recipe :

BREAD (one loaf)

**1. Mate-
rials
needed.**

- 1 cup liquid, scalded
- 1 tablespoonful shortening
- 1 teaspoonful sugar
- $\frac{1}{2}$ teaspoonful salt
- 1 cake compressed yeast dissolved in $\frac{1}{4}$ cup warm water
- 3 cups flour

Miss Ashley explained that the liquid used might be either milk or water or a mixture of both; that the



FIG. 126. — Material used in making bread.

shortening might be butter, lard, or drippings. She also said that at home when one had more time less yeast was usually used. She used one yeast cake for four or five loaves when there was no hurry about getting the bread ready to bake.

**2. Mixing
the mate-
rials.** The girls first dissolved the yeast cake; then they put the scalded liquid, salt, sugar, and fat into a bowl. When this mixture was lukewarm the dissolved yeast cake and about one fourth of the

flour were added and the batter was vigorously beaten. The rest of the flour was added gradually and the mixture beaten until a soft dough was formed.



FIG. 127. — Scrape the bowl clean so no dough will be wasted.

This dough they turned out on their floured boards, being careful to scrape every bit from the sides of the bowls (Fig. 127). Miss Ashley was very particular about this. She said that

3. Kneading the dough.

too many women were wasteful and that she did not want her class to be. The dough was kneaded until it was smooth and firm and little blisters appeared on the surface. What fun the class had learning to knead! Miss Ashley showed them how to do it (Fig. 128). She drew the edges of the mass of dough toward the center with her fingers and pushed the mass back with the broad part of her hand just below the thumb, at the same time turning it around toward the left with a quick rolling motion.



FIG. 128. — What fun the girls had learning to knead the dough! Miss Ashley showed them how to do it.

the mass of dough toward the center with her fingers and pushed the mass back with the broad part of her hand just below the thumb, at the same time turning it around toward the left with a quick rolling motion.

This was the hardest part of the lesson for the girls. Kneading works air into the dough and improves the bread very much so it is important to do it well.

A bread mixer such as you see in Fig. 129 is a great convenience in making bread for one does not have to use the hands to knead the dough.

The dough was then returned to the bowls, which had been washed and rinsed but not wiped, covered with a clean cloth, and set in a warm place to rise.

It is not always easy in a school kitchen to find places warm enough for dough to rise quickly. A temperature of 85° F. to 90° F. hastens the process, so some of Miss Ashley's class set their bowls of bread into

4. Setting the dough aside to rise.

pans containing water just as hot as the hand could stand (Fig. 130). Others placed theirs near the radiator and protected them from drafts.

When it had risen to twice its size the dough was shaped into loaves. The girls kneaded it slightly without the addition of any more flour and tried to make the loaves the shape of the oblong pans.

5. Shaping into loaves.

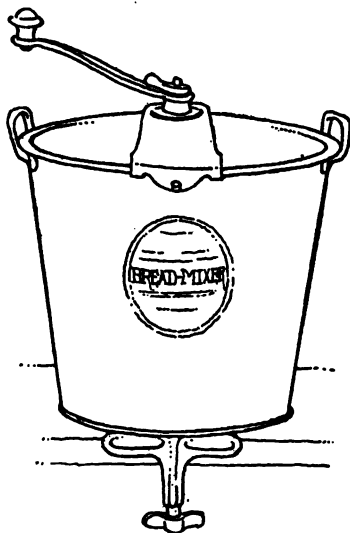


FIG. 129. — A bread mixer is a great convenience in making bread.

Each loaf was placed in a greased pan, a little butter was brushed over the top to keep a crust from forming,

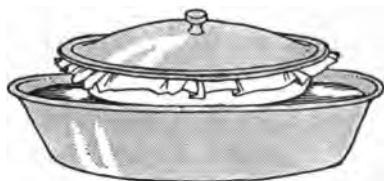


FIG. 130. — Some of the girls set their bowls of bread into pans of warm water.

and the loaves **6. Rising** were allowed to **in the pan.**

rise until twice their original size, when they were ready to be baked (Fig. 131). Again the girls were careful to keep the pans of dough warm.

One of the most important parts of making bread is the baking. It requires a steady oven, which must not be so hot that a crust forms on the loaf **7. Baking** before the dough has had a chance to rise in **the bread.**

the oven. A temperature of 380° F. to 400° F. gives good results, but not many stoves have thermometers so other tests for temperature may be made. If the oven

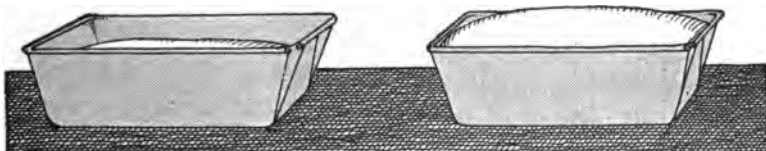


FIG. 131. — The loaves were allowed to rise until twice their original size.

will turn a piece of white paper golden brown in five or six minutes the bread may be put in. Ordinary sized loaves, weighing about one pound, should bake for one hour.

Miss Ashley helped the girls to bake their first bread. They tested the oven with the paper and after the loaves were put in kept the oven door closed for

fifteen minutes. During this time the bread rose a little and just began to turn brown. At the end of the

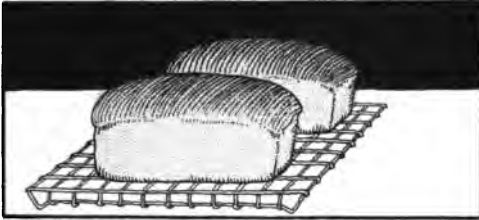


FIG. 132.—These loaves are cooling on a wire rack.

next fifteen minutes it had turned a lovely golden brown, and when they looked again no change seemed to have taken place. At the end of the hour it was a good rich brown and Miss Ashley said that it was done. She had had a great deal of experience in baking bread and said that it was safer to leave the bread in the oven a little too long than not quite long enough. Bread should be cooled by placing it on a

8. Cooling the bread.

wire rack of some kind so that the air can circulate around it. It should not be wrapped in a cloth and allowed to "sweat." Notice how the class cooled theirs (Fig. 132).

Bread may be made ever so carefully, but if it is not

III. How to care for the bread box.

properly cared for may not be palatable. After they have been cooled

the loaves should be put into a clean tin bread box

(Fig. 133). Before each baking the bread box should be washed thoroughly, scalded, and aired. Scraps of bread

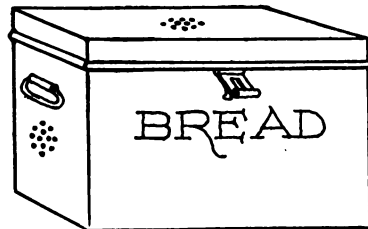


FIG. 133.—Bread should be stored in a clean tin bread box.

should never be allowed to accumulate, and under no circumstances should bread be allowed to mold in the box. Mold sometimes occurs when bread is wrapped in a cloth or when a cloth is used to line the box. Clean white paper makes a better lining.

Until the dough was set aside after the first kneading the attention of the girls was given to measuring, mixing,

and kneading. Then, "Why do we have to let

the dough rise, Miss Ashley?" came from one of the group. Some of the girls knew that letting the dough rise had something to do with making the bread "light"; others knew that it had something to do with the yeast; but

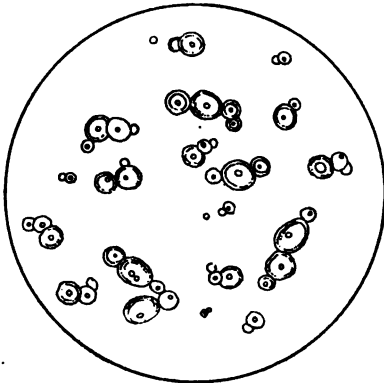


FIG. 134. — Yeast plants.

no one seemed to know just what yeast was nor what action took place in the dough. Miss Ashley told them that the yeast cake used in the bread is a mixture of meal and thousands of tiny one-celled plants called yeasts (Fig. 134). These little yeast plants are alive and begin to grow and make more plants when given food, moisture, a warm temperature, and air. All of these conditions are necessary to the growth of yeast. As the yeast grows it gives off little

IV. A study of yeast.
1. Yeast is a tiny plant.

bubbles of gas, called carbon dioxide, which are caught in the dough, making it porous and light.

Notice what materials were used in the bread and also how they were mixed. The sugar was put in to give the yeast something to feed upon at once and to hasten its growth. Why was the liquid warmed? Why was the dough set in a warm place to rise? Why was the flour added gradually and vigorously beaten? And why was the dough kneaded?

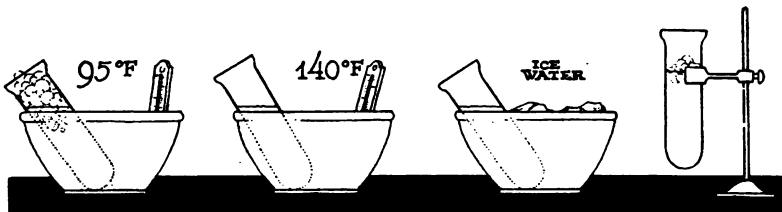


FIG. 135. — Experiments to show at which of the given temperatures yeast grows best. The last tube is in the temperature of an ordinary school kitchen.

To show the girls how important it is to give yeast the right temperature Miss Ashley let them perform an experiment. They made a thin batter using a half cup of water, two tablespoonfuls of flour, a half teaspoonful of sugar, and half of a yeast cake. After beating the mixture well one fourth of it was put into each of four test tubes. One tube was placed in a dish of water kept at 95° F.; another was put into a dish of ice water; another was left on the table at room temperature; while the fourth was placed in water hot enough to bring the mercury

2. Some yeast experiments.

to 140° F. At the end of fifteen or twenty minutes these tubes were examined. What do you suppose had happened? In which of the tubes was there the largest amount of foam? You perform the experiment and find out for yourself.

While it is very important to have good yeast and to know how to mix and care for the dough, good bread depends also upon good flour. While the loaves were rising in their pans the girls learned some very interesting things about flour. Wheat flour contains something without which a good light loaf is impossible. In order to show the girls what this substance is Miss Ashley let Mabel and Dorothy each take a half cup of flour and mix it with enough water to form a soft dough which they kneaded for about ten minutes. Then each put her dough into a

v. Good flour is necessary to make good white bread.

1. What does flour contain?



FIG. 136. — Washing some flour to get the gluten.

piece of cheesecloth and washed it in water until the water was clear and a creamy, yellow, sticky, elastic substance remained in the cloth (Fig. 136). They

put a few drops of iodine in some of the first water in which the dough was washed and it turned a beautiful blue. "Why,

that is what happened when we put iodine in our starch paste last fall," exclaimed Dorothy. "Is there starch in flour, too?" "Yes, this flour is about 75 per cent starch, and the sticky substance that remains in the cloth is gluten," said Miss Ashley. "Only about 11 per cent of the flour is gluten." The gluten was then shaped into little balls and put into the oven to bake. How those balls increased in size (they became about four times as large as they were), and how hard and dry they were when baked! When one was broken it was found to be full of holes.

Miss Ashley explained that gluten forms the framework of the bread. As the gas is formed by the yeast the gluten stretches, and the loaf is raised. There was no yeast in these little balls of gluten. What caused them to expand? Rye flour contains gluten, too, but it is not so strong or elastic as the gluten in wheat. Oatmeal and cornmeal do not contain gluten and when they are used in bread it is necessary to use some wheat flour if the loaf is to be light.

Flour must contain a good quality of gluten to make good bread. We can tell the quality of flour by its appearance and by its "feel." A creamy white flour with a slightly granular feeling is considered good. Very soft flour which feels a little damp and is bluish white in appearance is not of as good quality.

Do you know how flour is made? Some of the Ellen H. Richards girls who had always lived in the city did

2. The appearance of good flour.

not even know that it is made from wheat. The manufacture of flour from wheat is a long process. ^{3. How is} If you ever have an opportunity to visit a ^{flour made?} flour mill do so.

Ethel White, who had sometimes gone to town with her father to get flour from the mill where he took his wheat, said that the miller had shown her how it is made. The wheat is taken to the very top of the mill, where it is cleaned. It is next softened in some way by moist heat so that the bran can be more easily removed, and is then passed between several sets of corrugated steel rollers which cut and crush the grain and loosen the bran. After each "break," as passing between the rollers is called, the crushed product is sifted. The part that passes through the sifter is called "middlings," and that which remains is passed through the next set of rollers. The aim of each break is to separate middlings from bran and by the time the last set of rollers is passed most of them have been separated and may be sifted out.

Now the middlings must be made into flour. They are freed from all the particles of bran that remain and are then ground through smooth steel rollers until very fine. This fine product is put into a bolting machine which contains many, many sieves made of silk bolting cloth, and finally the fine white flour that we see is obtained. Ethel said that there was much more to know about the making of flour, but that the miller said these were the important processes in his new mill.

Flour has not always been made in this way. It would be interesting to find out how it was formerly made. Maybe you will study it in your history class as the Ellen H. Richards girls did.

In order to know what their bread cost and how much to charge for it the girls figured the cost while their bread was baking. They found that it cost just about as much as the baker's loaf, not counting all of the time and strength and fuel that were used. "Why do people bake bread at home if it is just as cheap to buy it?" asked Dorothy. Probably because there is a flavor and texture about good home-made bread that is so well liked, and, too, because home-made bread, if milk and shortening are added, can be made more nutritious than the average baker's loaf. However, in cities especially, increasing numbers of women buy the bread used by their families. The bread that you buy should be made of good materials in a clean bakery and should be wrapped before being handled by the distributors. Is the bread that you buy made in a clean place? Is it wrapped or do the hands of the boy who drives the bread wagon and pets his horse come in contact with the loaf? Do you know of any way in your town in which the baking and handling of bread could be improved?

Since the Sunnysiders were learning to bake bread in order to bake some later for their sale they were anxious to make loaves that would sell. The next morning when they came to the kitchen to see the bread Miss Ashley

VI. Shall
we buy
or bake
bread?

asked, "Which of these loaves do you think would be bought first if offered for sale?" The girls and Miss Ashley, too, thought that the loaves that were well shaped, and evenly browned with a crisp crust, would be the first chosen. "But the inside of the loaf should make a difference," suggested one of the girls. Several of the loaves were cut and discussed. The class concluded that the inside, or crumb, as Miss Ashley called it, should be creamy white, full of tiny little holes evenly distributed, and springy when pressed with the finger, and that it should have a pleasant, nutty taste and odor.

VII. What is considered a good loaf of bread?

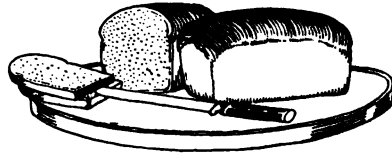


FIG. 137.— The girls decided that these were good loaves of bread. Do you see why?

Of course these first loaves of bread were not as good as the girls thought they should be. More practice in mixing and kneading and shaping of loaves was necessary. Miss Ashley permitted the girls to practice in class a few times; some of the girls baked bread at home and others practiced in the apartment. The bread made at school was used in the lunch room. The nicest loaves were made into sandwiches. Some of the stale bread was made into croutons, toast, bread pudding, fried bread, and bread crumbs for scalloped dishes. None of it was wasted. Sometimes the dough was made into rolls and these were either served fresh in the lunch room or sold to the

VIII. Uses for bread.

teachers or pupils. Just to make their bread or rolls different some of the girls used a little more sugar than the recipe called for and some added raisins or currants.

SUGGESTIONS FOR STUDY AND REVIEW

1. What do you think are the most important things to know in order to make a good loaf of white bread?
2. Why does the grocer keep the compressed yeast in the refrigerator?
3. Suggest several ways of keeping the dough warm while rising.
4. What may you do to keep the dough from rising too quickly?
5. What care should be given to the bread box? Why? How do you care for yours?
6. Is there a mill or a bakery in your town? Can your class plan a visit to learn more about the making of bread and the manufacture of flour?
7. Is the bakery in which your bread is baked as clean as you would wish to have it? If not, can you do anything about it?

LESSON 19

THE THANKSGIVING SPIRIT IN THE HOUSEHOLD ARTS CLASSES

Another special occasion which the girls enjoyed was the packing of Thanksgiving baskets to cheer up some of their friends in the neighborhood.

After talking it over the girls decided that this year they would like to send at least part of their Thanksgiving contribution to the Home for the Aged, to give the members of that large family a Thanksgiving Day

like those they used to have. The Home was in the neighborhood, and the girls thought that those who lived nearest should be considered first. They also decided to pack a basket for a family the father of which was without work because of illness, and whose Thanksgiving Day might be cheerless without some attention from the outside. By having a definite family in mind the girls knew exactly what and how much food to put in and they enjoyed thinking of the individual persons whom they were helping.

I. Planning to share Thanksgiving Day cheer.

When the girls asked Miss Ashley to let them make pies for the Home she couldn't think of any really good excuse for refusing. She might have said that pie is indigestible, but she knew that well-made pie eaten occasionally is no more indigestible than many foods regularly eaten; she might have said that little girls could not make pies, but she thought of the first pies she made when she was but twelve years old and knew that they could do it under her directions, so she consented.

Pie is one of the favorite American desserts, and its presence on the Thanksgiving table is an American tradition. Eaten too frequently or if not well made, it may cause digestive disturbance. It is not quickly digested because of the fat in the crust. Fat leaves the stomach more slowly than the other foodstuffs. Good pie crust should be light, very flaky, crisp, and tender.

II. Miss Ashley shows the class how to make pie crust.

Miss Ashley showed her class how to make it so. Later each girl made a pumpkin pie about six inches in diameter. How few ingredients were needed for the pastry! Only flour, lard, salt, and water. And how few dishes were soiled! Miss Ashley said that one of the secrets in making good pie crust is to have the materials very cold and to handle the dough just as little as possible. She used one third of the following recipe for a small, single crust pie such as each girl was to make.

1. The ingredients should be cold.

PLAIN PASTRY (Enough for one large, double crust pie)

1½ cups flour	½ teaspoonful salt
½ cup shortening	A few tablespoonfuls ice water

Sift the flour and salt into a cold bowl. Add the shortening and chop it into the flour with two knives. When the mixture looks like meal stir in enough water to make a stiff dough. Make the dough into a ball, divide it into two equal parts; turn each on a slightly floured board and pat it out round and roll it, keeping it as circular as possible until it is about one-fourth inch thick. Each piece will make one crust.

FILLING FOR PUMPKIN PIE (1 large pie)

1 cup cooked pumpkin (canned pumpkin will do)	½ teaspoonful ginger
½ cup brown sugar	½ teaspoonful salt
1 teaspoonful cinnamon	2 eggs
	2 cups milk

Mix the ingredients in the order given, stirring the mixture thoroughly.

Miss Ashley first measured the flour and put it into the sifter; she used the same cup to measure the shortening and after that was added to the flour in the bowl, used the cup for the water.

2. Miss Ashley discusses materials.

She said that some people use a particular kind of flour called "pastry flour" when making pies, but that ordinary bread flour is very satisfactory. She used lard for shortening, but said that various other fats such as cottolene, beef drippings, butter, or oleomargarine could be used, depending upon what one had on hand and upon the price of the fats.

3. Care used in handling materials.

As she cut the lard into the flour she was careful not to mash the mixture. When she added the water she poured a table-spoonful at a time

into the little well she had made in the flour and lard and stirred the mixture carefully with one of the knives she had used. She cautioned the girls against pouring in too much water and yet she said that they should use enough to hold the dough together.

After tossing the dough on the very slightly floured board she rolled it ever so lightly, beginning in the center and rolling it (Fig. 138) first toward the back, then

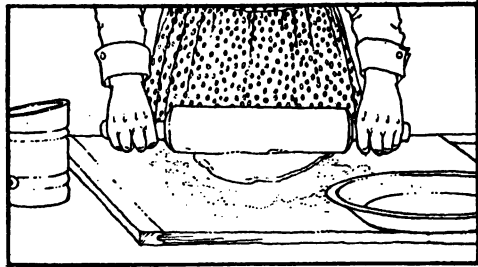


FIG. 138. — Toss the dough on a slightly floured board and roll it ever so lightly, beginning in the center.

toward the front, and then toward the sides, in this way keeping it circular in shape. Her hands scarcely touched the dough until she doubled it through the center and lifted it into a pie pan. She was careful to have it come close to the sides of the pan and well up to the upper edge. How deftly she crinkled the edges by pressing the dough with the thumb and finger of her right hand over the first finger of the left hand



FIG. 139. — Grandmother Edwards' way of crimping the edge of the crust.

(Fig. 139)! It made a very pretty edge, and at the same time trimmed off the extra dough. She brushed the dough with beaten white of egg so that the pumpkin

filling would not soak it and make it soggy. She told the girls that there were various ways of making pastry but that this was one of the simplest and most satisfactory and for their first pies would be the best.

The filling was not poured in until the pie tin, lined with pastry, was taken to the oven, for fear the filling would be spilled.

After watching Miss Ashley work, making a pie did not seem very difficult. Not all of the girls were able to make a dough of just the right consistency and not all were able to roll the pastry to fit the pie tins, but with Miss Ashley's

III. The girls make small pies.

help there were many very satisfactory pies on the table at the end of the class period and the girls were happy over the results. A real Thanksgiving Day atmosphere pervaded the air.

After the pies were baked the basket had to be packed and the pies and the basket delivered.

The committee appointed to plan the dinner for the Hunter family found out how many there were in the family, how old they were, and something about their needs. A group of the Ellen H. Richards teachers worked with an organization that kept in touch with needy families and thus the girls were able to secure the necessary information. They made a list of the food materials that they thought should be sent. This list was posted several days ahead of time and each girl checked the articles she could provide, and someone, maybe it was Miss Ashley, checked off the few that remained.

IV. Planning and packing the Thanksgiving dinner basket.

Constance told her mother that she didn't know which was the most fun, making the list, receiving the groceries as they came, or packing the basket. A half peck of potatoes, a head of cabbage, two loaves of bread, two cans of corn, two cans of tomatoes, a box of macaroni, three pounds of oatmeal, a half pound of tea, three pounds of sugar, a dozen oranges, a quart of cooked cranberries, a four pound roast of beef, and two quarts of milk, found their way into that basket (Fig. 140). Mrs. Moore thought this rather generous,

but Constance explained that the committee thought they should put in some things that would not be used for the Thanksgiving dinner so that there would be something left over for another day.



FIG. 140. — Are you planning to share your Thanksgiving Day?

Do you think this basket suited to a family of seven, — a father and mother, and three boys and two girls ranging in age

from five to thirteen years? What do you suppose they used for the Thanksgiving dinner?

SUGGESTIONS FOR STUDY

1. How are you planning to share your Thanksgiving Day? Are there any people less fortunate than you whom you can help to make happy?
2. Why are pumpkin pie and turkey typical Thanksgiving dishes? See whether you can find out.
3. Try to find out, too, how the Thanksgiving dinner in olden times was cooked.
4. In what ways did the kitchens in colonial days differ from ours? (See frontispiece.)
5. What share in the housework did the girls of your age take?

LESSON 20

A RED LETTER DAY IN THE ELLEN H. RICHARDS SCHOOL

Can you not plan to celebrate this occasion in your school?

December third is the anniversary of Ellen H. Richards' birth, and the school which bears her name celebrates the day each year.



FIG. 141. — Mrs. Richards, whose birthday is celebrated because she did so much to make home making a subject of study.

The household arts classes are always especially interested in the day because Mrs. Richards did so much to make home making a subject of study in schools.

I. In honor of Mrs. Richards.

When she was a little girl cooking and sewing and housekeeping were not taught in school, but girls learned how to do all kinds of work in the home by helping their mothers. Ellen Swallow (that was Mrs. Richards' name as a girl) was always interested in doing all kinds of work, and under her mother's careful instruction learned to do things very well. We are told that she did very dainty needlework for which she took a prize at a county fair, and that she also took a prize at the same time for the best loaf of bread. There was nothing about the house that she did not learn to do. She could cook, wash and iron, clean house, paper the walls,

1. Mrs. Richards as a young girl.

lay the carpets, sew, patch and darn, and also knew how to make the home beautiful and attractive.

While she liked housework very much this little girl also enjoyed outdoor fun and work. Her mother thought at times that she was quite a tomboy. She spent a great deal of time with her father and uncles on the farm, riding horses, driving cows to the pasture, and often helping with some of the farm work. Her love of the outdoors continued throughout her life. Even in her later years she enjoyed getting on her bicycle or working in her garden before breakfast.

One of her greatest pleasures was to work among the flowers. She and her mother, it seems, loved their house plants and flower garden and spent much time tending them. This love for flowers and plants continued, and her home was always made beautiful and attractive by them. She was also very fond of animals and made pets of them.

From childhood to its close Mrs. Richards' life was full of varied and interesting experiences. When she was sixteen years old she acted as clerk in her father's store, and did it so well that people thought she might be a member of the firm. But she was not quite happy measuring off calico, and selling sugar, molasses, and the hundred and one things a village store has to offer; her interests were larger. Later she taught school, but even here the work she had to do did not quite satisfy her ambitions. She had read and studied a great deal and finally decided to go to Vassar College,

where she made a brilliant record. Here she had a chance to satisfy her interest in the study of science, and later she was admitted as a special student to the Massachusetts Institute of Technology, where her work became of great interest to all who are interested in better homes and better home making. Sometime you will study more about this part of Mrs. Richards' work.

Mrs. Richards was a remarkably busy woman and yet she always had time to do beautiful things for others. She planned her work and her time ^{2. Doing} that way. She was always helping someone, ^{for others.} sharing herself and her home with friends and others who needed what she had to give. She was interested in college girls and boys and helped them in various ways. Her home was open to them, and they often went out and had dinner or supper with Professor and Mrs. Richards.

She had time to send books, magazines, and flowers, and to write notes to those who might need and enjoy them; to make calls upon and to plan all kinds of little picnics and excursions for her friends. You will like to know, too, that Mrs. Richards enjoyed celebrating anniversaries, especially the birthdays of her friends. She seemed to know just what to do to give them pleasure.

Those who knew Mrs. Richards tell many interesting things about her. Her life was very full, — full of work but still more full of thought for others. After one hears and reads about her beautiful life one wonders

after all if doing something for someone else isn't really the biggest thing in life.

Do you see why the girls in the Ellen H. Richards School are glad to have their school bear her name? And can you see a good reason for celebrating Mrs. Richards' birthday?

When asked to choose how to celebrate Mrs. Richards' birthday the Sunnysiders decided that one of the best



FIG. 142. — In honor of the birthday.

ways was to do something that Mrs. Richards had so often done — extend hospitality to others; and because it was her birthday they wished to call it Mrs. Richards' Birthday Party.

Celebrating a birthday is always a pleasurable event in any group, whether at home or at school. It is a happy way of showing our affection for or appreciation of a person. Members of a family always seem a little closer to each other after celebrating some anniversary together, and in the same way the pupils in the Ellen H. Richards School always thought of more kind things to do after hearing of the things Mrs. Richards had done.

One of the features of the birthday party was, of course, the birthday cake (Fig. 142). It may not be necessary to have cake at a birthday party, but nearly everyone expects and enjoys it.

II. Why
do we
celebrate
birthdays?

Would you like to know what kind of cake the girls made and some of the things they learned in making it?

There are so many kinds of cake that it was difficult to know which to choose among them. Those that are made of flour, sugar, and eggs, without the use of butter or fat of any kind, are no doubt more easily digested than those that contain much butter. Rich, sweet cake should not be used too often, for, like candy, it may cause fermentation in the stomach. It is much better also to use it as part of the meal rather than in between meals. Plain cake, that in which but little butter and sugar are used in proportion to the amount of flour, is without doubt better for most people. It is less expensive, too. After talking it over the girls decided to make a plain butter cake. You see they were going to use it in the afternoon and, too, butter and eggs were high priced and had to be used economically. But as Dorothy said, "The cake may be plain, but it will not look plain with the lighted candles on it."

III. What kind of cake should the girls make?

PLAIN BUTTER CAKE

$\frac{1}{4}$ cup butter	$\frac{1}{2}$ cup milk
$\frac{3}{4}$ cup sugar	1 $\frac{1}{2}$ teaspoonfuls baking powder
2 eggs	1 $\frac{1}{2}$ cups flour
	1 teaspoonful vanilla

Cream the butter; add the sugar, gradually, creaming constantly; add the eggs, and beat the mixture well. Mix and sift the flour and baking powder together, and add them to the first

mixture alternating with the milk. Add the flavoring. Beat the mixture well. Bake in greased muffin tins or in layer or loaf tins.

Miss Ashley told the class that the ingredients and proportions used in the above recipe may be modified in many ways, as may also the method of mixing. The addition of one teaspoonful each of cloves, nutmeg,

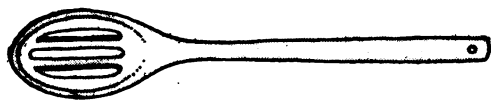


FIG. 143. — A good spoon for mixing cake.

and cinnamon gives a nicely flavored spice cake; the addition of two squares of

chocolate melted gives a dark chocolate cake.

Do you know what is meant by creaming the butter? It simply means that it is worked with a spoon or fork until it becomes soft and creamy. Creaming

1. A few suggestions for mixing cake.

the sugar with the butter helps to dissolve the sugar; if the sugar is not dissolved before the cake is put into the oven it may become coarse grained. By alternating the milk and flour one is better able to make a smooth batter. Beating the mixture incorporates air and helps to make it light; it helps also to give the cake a good texture.

Cake pans should always be prepared before the cake is mixed. Tin or aluminum pans are satisfactory.

2. Baking cake.

If the pans are to be greased the fat may be applied with a piece of soft paper or with a brush kept for the purpose. A little flour sprinkled evenly over the bottom of the pan prevents the cake

from sticking. Excess flour should be removed by turning the pan upside down and tapping the bottom.

Plain cake should be baked in a moderate oven, one that will brown a piece of white glazed paper in five minutes. Cake is done when the color is a golden brown, and when the mixture shrinks away from the sides of the pan; when a clean toothpick inserted comes out without any particles of the mixture sticking to it; or if the cake springs back when pressed on top with the finger.

Cake may be iced or not as one chooses. The Sunnysiders thought that a real birthday cake should have an icing even though it was a very simple one. Miss Ashley suggested that a simple white frosting be made and gave the girls the following recipes from which to choose.

CONFECTIONER'S FROSTING

2 tablespoonfuls hot water Confectioner's sugar
Flavoring

Sift the sugar and add to the water as much as is necessary to make of the right consistency to spread. Flavor with vanilla or lemon extract. Cream or fruit juice may be used in place of water.

COOKED ICING

1 cup sugar 1 egg white
½ cup hot water 1 teaspoonful flavoring extract

Dissolve the sugar in the water. Boil gently without stirring until it spins a fine thread when tested. Pour slowly over the

stiffly beaten white of egg and beat until it holds its shape when dropped from the spoon. Add the flavoring. Spread the mixture over the cake. Chopped raisins or nuts or a little melted chocolate are sometimes added to give variety.

It is not necessary to tell you about the birthday candles, but they were provided. The Sunnysiders looked out for that. They felt that candles were an important part of the birthday cake.

Can you not try sometime to make someone in your family happy by making a birthday cake?



FIG. 144. — Some suggestions to please the children.

Perhaps some day you may like to have a party for young children and will not want to serve a sweet or rich cake. Why not please them with sponge cake, cookies, or "gingerbread men"? Here are some recipes.

IV. To please the children.

SPONGE CAKE

4-6 eggs	1 tablespoonful lemon juice
1 cup sugar	Grated rind of half a lemon
$\frac{1}{2}$ teaspoonful salt	1 cup pastry flour

Beat the yolks and whites of the eggs separately, the yolks until thick and lemon colored, and the whites until stiff and dry. Add the sugar to yolks, then the lemon juice; beat again. Sprinkle the salt over the egg whites. Cut and fold part of the stiff whites into the yolks, sift over the mixture a third of the flour, cut and fold.

Add more of the whites and the flour, cut and fold in as before. Add the remaining whites and flour, cut and fold. Put into ungreased pans. This cake may be baked in muffin tins, layers, or a loaf. If small cakes or layers are made they will require about 25 to 30 minutes in a moderate oven; if the cake is baked in a loaf, an hour in a moderate oven will be necessary. The loaf cake should be baked in a tin like the one seen in Fig. 145.

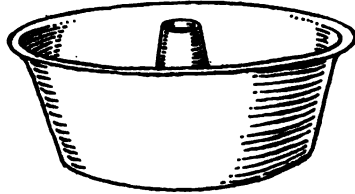


FIG. 145.— A good pan for baking sponge cake.

CRISP SUGAR COOKIES

$\frac{1}{2}$ cup shortening	$1\frac{1}{2}$ teaspoonfuls baking powder
1 cup sugar	$2\frac{1}{2}$ to 3 cups flour
$\frac{1}{4}$ cup milk	$\frac{1}{2}$ teaspoonful nutmeg
1 egg	1 teaspoonful flavoring extract

Mix the butter, sugar, egg, and milk very thoroughly. Add the baking powder and nutmeg to one cup of the flour. Sift into the first mixture. Add as much more of the flour as is needed to make a dough easily handled. Take about one third of it at a time, roll to one eighth inch in thickness. Cut into desired shapes. Sprinkle with a little sugar and bake about ten minutes.

"GINGERBREAD MEN"

$\frac{1}{2}$ cup shortening	$\frac{1}{2}$ teaspoonful soda
$\frac{1}{2}$ cup brown sugar	1 teaspoonful ginger
1 egg	$\frac{1}{2}$ teaspoonful nutmeg
1 cup molasses	$\frac{1}{2}$ teaspoonful cinnamon
$1\frac{1}{4}$ cups flour	$\frac{1}{2}$ teaspoonful salt

Mix the shortening, sugar, molasses, and eggs well; mix all the dry ingredients and sift into the first mixture. Add a little more

flour if necessary. Roll to one fourth inch in thickness, cut into fancy shapes as liked; bake on a buttered sheet in a moderate oven. If "gingerbread men" are made, currants or raisins may be used for the eyes and nose.

SUGGESTIONS FOR STUDY AND REVIEW

1. Get from your school library "The Life of Ellen H. Richards," by Caroline Hunt, and read the chapters about her girlhood and her life in her home.
2. What reasons can you give for celebrating the birthdays of great men and women?
3. Why should we celebrate the birthdays and anniversaries of the members of our families and friends?
4. Suggest some pleasant way of remembering your father's or your mother's birthday.

LESSON 21

HELPING WITH THE CHRISTMAS PARTY

Making candy and pop corn balls.

When the Christmas party was planned each of the classes did its share to help. The household arts classes helped to fill the boxes and stockings with homemade candy and tied up many pop corn balls.

Did you ever hear of a girl who did not like to make and to eat candy? Have you ever known anyone who ate too much? The sweetness of candy is so much enjoyed that there is danger of eating more than one should without being aware of it at the time.

I. Candy
is a food
and should
be eaten at
mealtime.

Pure candy is a good food, but it is such a concentrated food that only small amounts should be eaten at any one time. The best time is at the close of a meal. When eaten on the way



FIG. 146. — A very special occasion at the Ellen H. Richards school.

home from school at noon, or in the middle of the afternoon, it often satisfies the feeling of hunger and consequently not enough of the necessary kinds of food are eaten at mealtime. Have you ever heard someone say of a girl who has poor teeth that she ate too much candy? It may be that she ate so much of it that she did not feel hungry for the fruits and vegetables and cereals that would have given her the kinds of building material that the teeth need to make them of good quality. Eaten at the end of a meal, this danger is avoided.

Another reason for not eating candy in between meals is that it is apt to ferment in an empty stomach and cause an unpleasant feeling. Eaten alone, it irritates the lining of the stomach, and if this is done too often the stomach may not be able to do its work as it should. Everyone needs good digestive organs to keep the body in good working order, and if sucking lollipops and eating other sweets between meals interferes with this work, no one should continue the habit of using them.

At Christmas time, when more candy than usual is apt to be around, one should be careful not to eat too much of it. By making Christmas candies at home it is possible to combine sugar with other materials and in this way to offset in a measure some of the difficulties just mentioned.

Miss Ashley told the girls that molasses contains lime, which is a necessary building material, and that candy made of it is a better sweet food for growing

children than that made of sugar. She said that prunes and dates are good sweetmeats, too, because they contain valuable iron and other mineral salts as well as sugar, and that when it is possible to use them to give sweetness to food it is very desirable to do so.

II. Some suitable candies to make at home.

Since the Sunnysiders were going to make their candies for the school children they made the following, which they thought would not be so concentrated as "regular candy" and would contain other foodstuffs than sugar (Fig. 147).

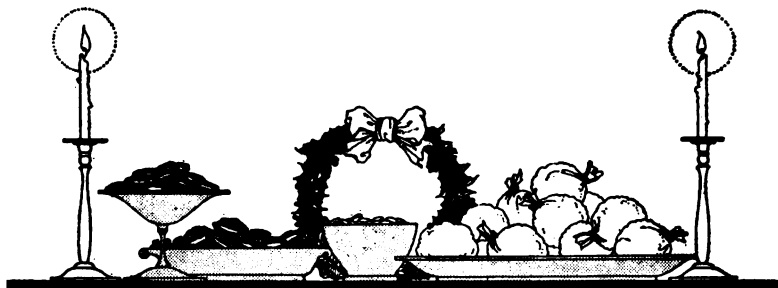


FIG. 147. — Stuffed prunes and dates and pop corn balls for the children's Christmas party.

PUFFED RICE CANDY

$\frac{3}{4}$ cup corn sirup
 $\frac{3}{4}$ cup molasses

$1\frac{1}{2}$ tablespoonfuls vinegar
 2 tablespoonfuls butter

1 package puffed rice

Boil the sirup, molasses, vinegar, and butter until crisp when tried in cold water. Add the puffed rice, which has been heated. Stir rapidly till well cooked, then drop by spoonfuls on waxed paper. Each piece should be wrapped in waxed paper.

HOUSEHOLD ARTS

STUFFED DATES AND PRUNES

1 pound prunes or dates	$\frac{1}{2}$ cup raisins
$\frac{1}{2}$ cup nut meats	$\frac{1}{2}$ cup sugar

Wash and steam the prunes or dates and remove the stones. Wash the nuts and raisins, dry on a cloth, and chop very fine. Fill the prunes or dates with the mixture. Put the sugar in a paper bag. Drop in a few of the stuffed prunes at a time and shake until coated with sugar.

PEANUT BRITTLE

$1\frac{1}{2}$ cups sugar	$\frac{1}{8}$ teaspoonful cream of tartar
1 cup hot water	A pinch of salt
$\frac{1}{2}$ cup shelled and chopped nuts	

Stir the sugar, water, cream of tartar, and salt together until dissolved. Set on the stove and boil gently without stirring or moving the pan until the sirup turns straw color.

Put the nuts into a greased pan and when the sirup is ready pour it over the nuts and allow to cool.

POP CORN BALLS

$1\frac{1}{4}$ cups molasses	$\frac{1}{2}$ tablespoonful vinegar
$\frac{1}{4}$ cup brown sugar	$\frac{1}{2}$ tablespoonful butter
3 quarts popped corn	

Boil the molasses, sugar, vinegar, and butter until the sirup is almost brittle when dropped into cold water. Salt the pop corn. Pour the sirup over about two thirds of the corn. Shape large spoonfuls into balls and roll in the dry pop corn until no more will stick to the balls. Wrap in waxed paper.

The girls enjoyed wrapping their boxes and pop corn balls in bright-colored papers to hang on the tree. Miss Washburn, the art teacher, helped the girls to make them attractive. Christmas gifts, however small, she said, always give more pleasure when special care is given to the wrapping and tying. There was no danger in covering the pop corn balls with colored paper for they were first wrapped in waxed paper.

III. The Christmas boxes were made attractive.

At the close of the lesson several of the girls planned to get together Saturday morning to make candies for gifts for some of their friends. Miss Ashley suggested that after this they use homemade candy instead of buying it so frequently. She suggested, too, that no more candy be bought from the push carts or from stands where it is exposed to dust, dirt, and flies. Candy should be stored in the cleanest of places and should be handled in a most sanitary manner. There should be nothing harmful in it or on it. Sometimes the cheap candies sold by the push cart dealers and others contain coloring matter and other adulterants which are harmful to the body; however, great care is taken by Federal inspectors to have only pure candies made and sold.

IV. Some suggestions for buying candy.

Have you ever had a curiosity to know how many pounds of candy are eaten in this country each year? We are told that Americans spend over \$200,000,000 a year for factory-made candy. That does not represent all that is spent, for there are tens of thousands of

pounds made in schools and in homes in addition to that made in factories. Just think what a great amount of sugar is used for candy-making purposes!

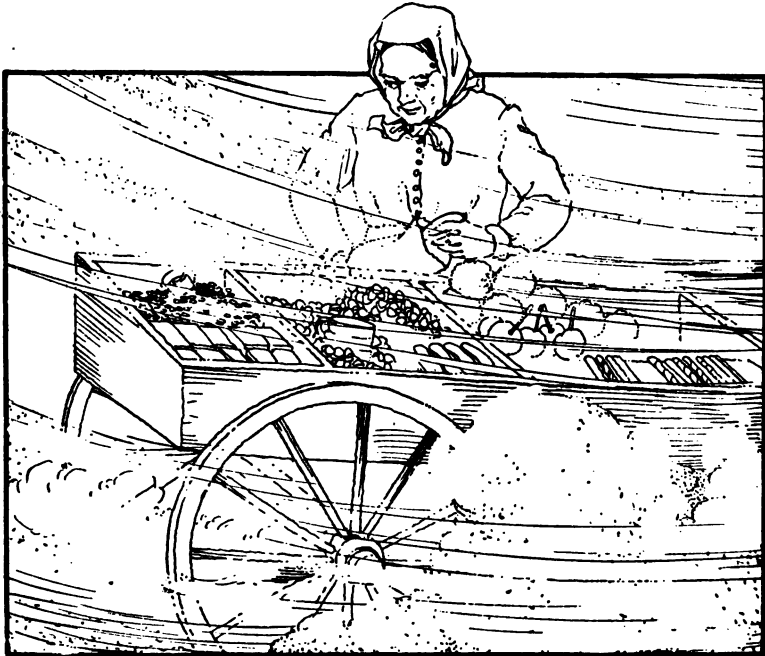


FIG. 148.— Do not buy candy which is exposed to dust and dirt, as is so frequently the case in push carts.

When you are buying or making candy do you ever wonder where all the sugar used in its manufacture

V. The manufacture of sugar. comes from? Natalie and Dorothy became interested in finding out what they could about the production of sugar and brought some very interesting information to class. Maybe you, too, would like to know about its manufacture.

Sugar is one of the most universally liked foods that is manufactured ; it is really surprising that it is used in so many dishes and that it is missed so much when it cannot be obtained in normal amounts.

The white granulated sugar in your sugar bowl may have come from one of two plants — the sugar cane (Fig. 149) or the sugar beet (Fig. 150). The sugar cane, which is the oldest and best known sugar-producing plant, grows in warm climates. A great deal is raised in Cuba, Porto Rico, Hawaii, the Philippines, Mexico, South America, India, and in our southern states, especially Louisiana and Texas.



FIG. 149. — The oldest and best known sugar-producing plant.

Sugar cane, when growing, looks very much like corn with its

tall, jointed stalk and long, bladelike leaves. When the stalks are in just the right condition they are cut off near the ground, stripped of their leaves and green tops, and taken to the mills. It is very important that cane growers know just when to cut the stalks in order to get the greatest



FIG. 150. — About half of the sugar used is obtained from sugar beets.

a. Producing the raw sugar.

amount of sugar. In the mill the stalks are crushed in passing through a series of heavy rollers which reduce the cane to a pulpy mass in order that the juice may be squeezed out. This "crude juice," as it is called, contains many impurities which must be removed. Some of these, like the coarse fiber, may be strained out; others are removed by means of lime and heat. This process is known as *clarifying* or *purifying* the juice. The juice is next reduced to a sirup by means of evaporation carried on in vacuum pans. You know how sugar and water when boiled make a sirup and how the sugar sometimes crystallizes out. Well, this is what happens in the mill, too. Then the sirup is run into another and larger vacuum pan where more water is carried off and the sugar crystals form. This part of the process requires very careful attention in order to get just the right kind of crystals.

When the crystals have formed and the whole mass is of the right consistency it is drawn into large drums or cylinders lined with perforated baskets which are whirled around very rapidly. As the mass is thrown against the sides of the baskets, the molasses passes through the holes and the soft, yellowish mass of sugar crystals remains. This is known as *raw sugar*. The raw sugar is put into bags and is ready to be shipped to the refineries, where it is made into the forms we use.

The process of refining requires so much fuel that it must be done on a large scale in order to make it pay.

There are only about twenty sugar refineries in the United States and they are located near the Atlantic and the Pacific coasts so that the cost of transportation from the plantations may be kept as low as possible. In order to reduce the cost of handling, the refineries are built many stories high. The raw sugar is carried to the top of the building and is there washed by mixing it with a thin sirup to help remove the remaining molasses. It is then put into centrifugal machines and most of the sirup is thrown out. The crystals which remain are melted and the sticky sirup thus made is filtered and clarified and run into vats called crystallizers, where it is stirred constantly while cooking. This causes the sugar to recrystallize. After the crystals have been sprayed with water to remove any remaining sirup, and treated with blue water to give them the desired color, the crystals are ready to be pressed into cubes, dominos, or other forms, or to be sent to the granulator to be made into the common granulated sugar that you have in your sugar bowls.

Only about one half of the sugar used is obtained from sugar cane; the other half comes from sugar beets. The beet sugar industry is not nearly so old as the cane sugar industry, but it has grown wonderfully in recent years. Would you not be interested to see what you can learn about the cultivation of sugar beets since it is such an important industry in the United States?

b. Refining
the sugar.

2. Sugar
from sugar
beets.

Some of you probably live in a section of the United States where another kind of sugar is produced and no doubt look forward to the time of year when the sap begins to flow. Maple sugar, because of its delicious flavor, is a general favorite. It is

3. **Maple sugar.**



FIG. 151. — Maple sugar is obtained from the juice of sugar maple trees.

obtained from the juice of sugar maple trees, Fig. 151, which grow most abundantly in Vermont, Michigan, Ohio, and Indiana. In the spring of the year the trees are tapped and the juice which is collected is boiled down in open kettles and the sugar is crystallized. It

does not have to be refined, since the raw sugar has the flavor so much enjoyed.

SUGGESTIONS FOR STUDY AND REVIEW

1. Give two good reasons why one should not eat candy between meals.
2. What does molasses contain which adds to its value as a sweet?

3. Why are pop corn balls and puffed rice candy better for the Christmas tree than chocolate creams ?
4. When you make candy at home, figure the cost and compare it with the cost of the same amount purchased at the store.
5. Are there any dealers in your neighborhood who do not store or handle candy in a sanitary manner ? What can you do about it ?
6. What is raw sugar ? How is it obtained ?



CHAPTER V

THE HOME BREAKFAST

LESSON 22

SOME NECESSARY PLANNING FOR HELPING WITH THE HOME BREAKFAST

The making of a fireless cooker.

A part of the home work for the home-making class one week was to set the dinner table and to assist with the dinner dishes. The following week Miss Ashley suggested that each girl do something to assist in the preparation of the home breakfast. There are some preparations for breakfast that may be made in the evening, and every girl likes at some time or other to be able to assist with the breakfast, or to prepare it by herself.

When the suggestion was made that help be given with the home breakfast many of the girls thought that it meant getting up much earlier and rather hesitated to undertake anything that they knew would be so difficult, although Miss Ashley said that any schoolgirl who went to bed by nine o'clock should be able to be up and dressed by seven or a little after. Schoolgirls need at least nine hours of sleep, and it is possible for

them to get it if they go to bed promptly at nine o'clock. This makes it possible, too, for them to get up in time to give some help with the work, especially where there is a great deal to do.

The amount of work and the time required for getting breakfast vary of course in different families according to the kind of meal served.

In discussing the kinds of breakfasts served in their own homes, in order to determine what help the girls

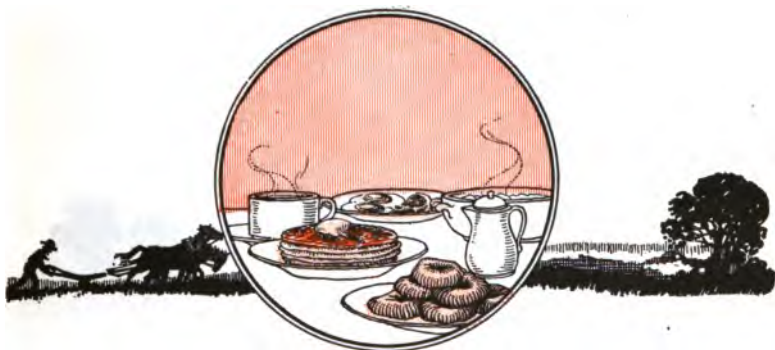


FIG. 152. — The farmer requires a hearty breakfast.

could give, it was found that many different kinds of breakfasts were served. Some of the girls were quite surprised to find that there could be so many types of breakfasts and were very much interested to learn why.

Mabel White, who you may remember moved from her farm home to Commonwealth City, said that their breakfasts on the farm differed very much from the breakfasts they now served (Fig. 152). She said that they used to have

**I. Why
breakfasts
vary in
different
families.**

potatoes, meat, pancakes, sirup, coffee, and sometimes other good things, and that her father and the hired man ate as much for breakfast as for dinner and enjoyed it, too. Since coming to the city, however, no one seemed to care for so much to eat, and sometimes all they had for breakfast now was cereal, toast, and coffee.

Margaret Langley, whose father was a postman, said that they always had cereal and milk, some kind of



FIG. 153.—The postman needs something substantial for his morning meal.

bread, and a hot dish, such as eggs, creamed fish, or hash, as her father got too tired and hungry before noon if he ate less (Fig. 153). She added that she never wanted anything more than the cereal, milk, and toast.

Miss Ashley said that that was what she liked best, too, but that she wanted some kind of fruit in addition.

Now why these differences in breakfasts? Miss Ashley explained that the farmer, who works hard outdoors all day in the fresh air, needs more food than the man who is not exercising so much. He needs "hearty" food that is not too quickly digested, such as the pancakes and sausage that Mabel spoke of. Rich food, food that contains fat, does not leave the stomach as quickly as that which contains no fat, and consequently Mabel's father and his hired man would not feel hungry too soon after breakfast, but would be able to do hard work all morning. The postman, who is out all morning, does not exercise quite so actively as the farmer and does not need quite so much food, but he, too, must eat something that will "stay by" him until luncheon time. Fresh air and exercise make one hungry, as any one of you who has ever gone to a picnic knows.

1. The amount and kind of work one does make a difference in his meals.

What kind of breakfast will be needed by Mr. Edwards, who is a cashier in a bank? More or less than Mr. Langley, the postman? Mr. Edwards does not exercise so much and consequently will not need so great an amount of food; and because he is not muscularly active and does not have so much fresh air he will have to be more careful of the kind of food he eats. Mrs. Edwards always serves some kind of fruit for their breakfast, a well-cooked cereal and milk, toast, or rolls, and occasionally an egg or a warmed-over dish of some kind. She is particular to have the fruit, and the cereal and milk, for even baby Dorothy and

John Edwards, Jr. may eat these and it saves her getting two breakfasts.

Dorothy Vincent, who usually spent the summer in the country, said that she noticed a difference between their summer meals and their winter meals. She said that they very frequently had just berries, toast, and milk for breakfast and for supper in camp, but that they never thought that was enough when they came back to the city in

2. The season of the year also makes a difference.

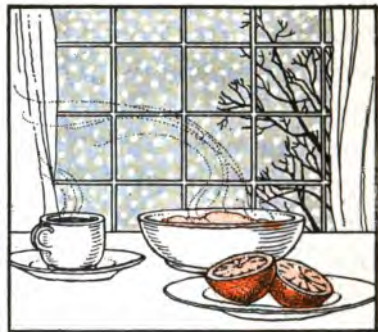
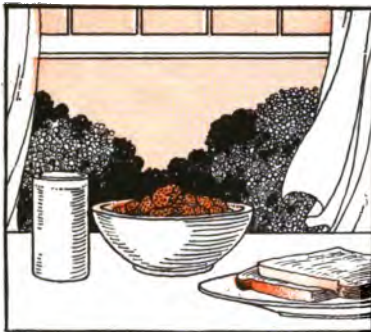


FIG. 154.—The season of the year makes a difference in our meals.

the winter (Fig. 154). Many people find that they are much more comfortable in the summer when they do not eat very heartily, but in cold weather more food is needed to keep the body warm. Of course fat food and meat are unnecessary in the summer; milk, cheese, eggs, fresh fruits, and vegetables are very much better.

It is very easy to sit and talk about the kind of meals that other people should eat. But what about our-

selves; what kind of breakfast should a schoolgirl eat? There are those girls who get up just in time to get dressed and dash off to school without any breakfast. Are you one of them? That means that the body goes without food from six o'clock in the evening until twelve o'clock noon the next day. Eighteen hours is too long for a growing girl to go without food and no one who respects her body and wants to keep well should do this. It would be much more healthful to rise a half hour earlier and eat a suitable breakfast.

II. What kind of breakfast does a school-girl need?

“My mother says that a girl who does not feel able to eat a satisfactory breakfast is not well enough to go to school,” volunteered Dorothy Vincent. Dorothy was an active, outdoor type of girl and was growing rather rapidly. Her mother knew that she needed good, substantial food and planned to satisfy Dorothy’s needs. The Vincents’ morning meal was very simple but was well cooked and attractively served. Fruit, cereal, toast, and milk, with the addition of an egg or a little bacon when these were not too expensive, made up the usual breakfast (Fig. 155). Mr. and Mrs. Vincent had coffee with their meal, but Dorothy drank milk or cocoa.

One reason why Dorothy enjoyed her breakfast was that she slept with her windows wide open. Fresh air always seems to give one a good appetite. Do you know why? What do you think of the breakfast Mrs. Vincent served? Why were both Mrs. Edwards and

Mrs. Vincent so particular to include fruit, cereal, and milk? Why should the meals of young children and schoolboys and girls be especially well planned?

Every girl should want to grow to be a strong, well, active woman; she wants to have good, red blood, strong bones, firm muscles, a good, clear skin, clean, sound teeth, and hair and nails of good quality. She wants to be just as physically fit as it is possible for

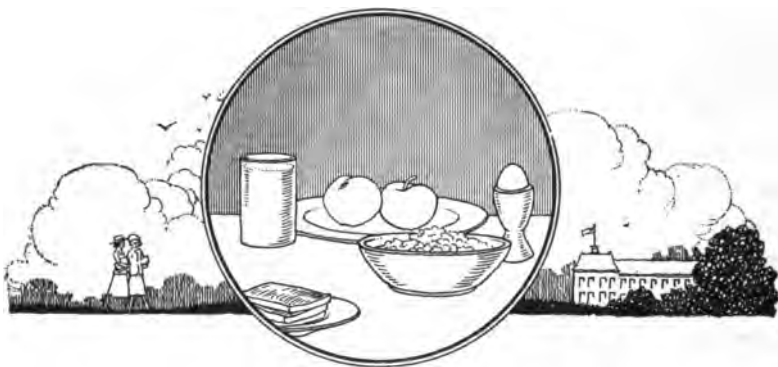


FIG. 155. — A suitable breakfast for a schoolgirl.

her to be, for the world needs just that kind of girls and women. The food that she eats will make a very great difference in the kind of body a girl develops, and for that reason it is very important that every girl and woman should know how to select and prepare the right kind of foods.

Breakfast is an important meal, not only because of the food that is eaten, but because it marks the beginning of the day and exerts its influence upon the members

of the family for the entire day. The members of the family who leave home to work like to enjoy the memory of an attractive breakfast table surrounded by a happy family. It makes them eager to return to their homes as early as possible after the day's work.

III.

Breakfast should be a pleasant meal.

There is too often a temptation to neglect the details of the meal, and too often the personal appearance of



FIG. 156. — Everyone should appear at the breakfast table as dainty, fresh, and clean as possible.



FIG. 157. — Curl papers, untidy hair, and careless dress do not help to start the day right.

the members of the family is neglected. Everyone should appear at the breakfast table as dainty, fresh, and clean as possible. Curl papers, untidy hair, and careless dress do not help to start the day rightly, and no girl should feel that she has the right to come to the dining room until she can present a pleasing appearance.

Mr. Vincent told Miss Ashley that he felt the day

had not started rightly unless he saw all the members of his family at breakfast. He was away from home all day and unless Dorothy and her brothers ate breakfast with him he did not see them until evening and then for only a short time, as the children went to bed about nine o'clock. One way that Dorothy helped most with the breakfast was to be there on time, fully dressed for school. Do you help this way in your home?

Of course there are many other ways of helping, too. The mother of a family has many things to look after in the morning and has to take many steps unless someone is thoughtful enough to help. Can you not air the dining room, set the table, pour the water, and help carry the food to the table? These are not difficult tasks, but they save mother's steps. Since the kind of food usually served is easily prepared, any schoolgirl should with a little practice be able to get the entire breakfast.

The Sunnysiders decided that they would at least try to help with the breakfast in some new way each week for a month if Miss Ashley would give them some assistance. Miss Ashley was ready to begin at once, and in their first lesson they learned how to help cook the breakfast by doing some of the work while clearing up the dinner dishes the evening before! That seems a strange time to begin, doesn't it? But Miss Ashley explained that some of the foods that nearly everyone seemed to want for breakfast, even though simple and

**IV. Ways
of helping
with the
home
breakfast.**

**V. The
use of the
fireless
cooker.**

very easily prepared, require long cooking, and since no one wants to get up earlier than necessary it is possible to have a part of the breakfast cooking while the family is sleeping. She told them how she and Miss Roberts always cooked their cereal in a fireless cooker which they had made one evening after school, and that she would show them how to make one if they cared to know. She had brought her fireless cooker to school for the girls to see, and she also had on hand the materials out of which they could make one. Would you like to know what was used and how the Sunnysiders made their fireless cooker?

Miss Ashley had provided a large wooden candy bucket which measured seventeen inches across the top and nineteen inches in height; a straight-sided tin can or lard pail ten inches high and nine inches in diameter; another galvanized iron pail of the same shape but small enough to fit into the first one; covers for both pails; a box of clean, dry sawdust; some tennis flannel; a box of clean excelsior; and some asbestos (Fig. 158).

1. Making
a fireless
cooker.

The girls followed Miss Ashley's instructions in the making. They put sawdust into the wooden bucket to the depth of five inches, then set the larger pail in the center, surrounded it with a piece of asbestos, and filled the space between the asbestos and the wooden bucket with sawdust. Over the top of the sawdust they tucked some paper to fit and covered it with a fitted piece of asbestos. A round cushion about five

inches thick was made out of the flannel and excelsior and placed over the top. Last of all the wooden cover was put in place and held down with hooks.

The smaller pail was to be the food container. Any food that may be cooked in water is brought to the boiling point on the stove and after it has boiled five or more minutes is put into the fireless cooker and covered up. The material around the boiling hot food carries the heat away from

2. How to use the cooker.

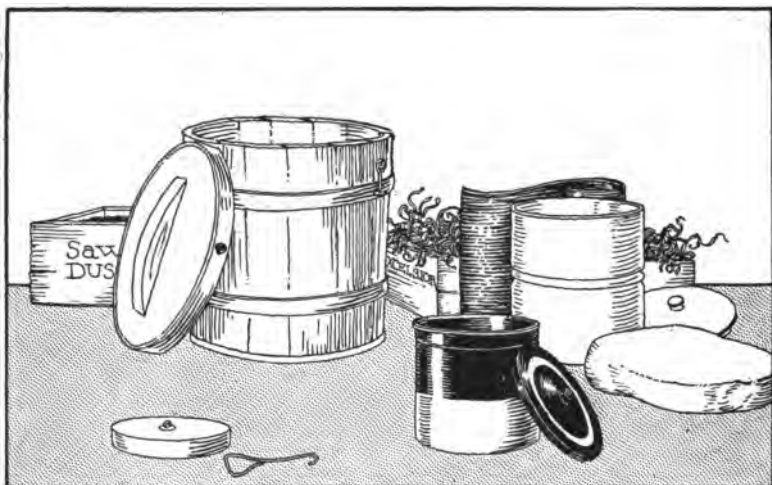


FIG. 158.—The Sunnysiders made a fireless cooker.

it so slowly that it cooks before it has a chance to get cold. Nearly all kinds of foods may be cooked in the fireless cookers that are on the market for sale, for many of them are provided with special devices of various kinds. The homemade cooker, such as Miss

Ashley's class made, will do very nicely for cooking cereals, dried fruits, dried beans and peas, meat stews, and soups.

Miss Ashley said that foods which remained in longer than five or six hours would have to be reheated,

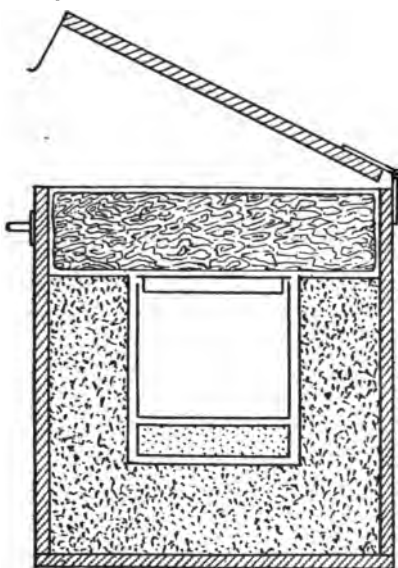


FIG. 159.— Cross section of a fireless cooker.

but that cereals and dried fruits, beans, and peas might stay in even though they did not remain hot. She said that meat should not be allowed to stand in the cooker after it had lost its heat because it might spoil.

3. Reheating the food.

She also told the girls that it was necessary to keep the cooker very clean. The tin pail which made the nest should be washed carefully but it

4. Keeping the cooker clean.

should not be removed. The tennis flannel cushion cover could be washed when necessary.

"Miss Ashley, it is easy to understand about the fireless cooker because we have been studying about heat and cold in our general science class," said Constance. "I believe some other materials could be used in place of sawdust, for we learned of several materials that

took the heat away from hot things slowly." "Maybe you can suggest some other packing for our cooker," said Miss Ashley. Constance recalled that newspapers, hay, excelsior, and cork were all poor conductors of heat and concluded that they might be used if sawdust were not obtainable.

A box of suitable size may be used in place of the candy bucket, and different kinds of pails will answer the purpose, too.

"I wish we could put something into it right away. I can hardly wait to see if it will work," said Margaret Langley, who was already thinking how she might make one at home.

SUGGESTIONS FOR REVIEW

1. What effect do exercise and fresh air have upon your appetite?
2. Why should a healthy, active girl eat good, wholesome food? Write a list of foods which you think are especially good for her and tell why you think so.
3. Why is an outdoor worker more able to use fried food than an office man?
4. Make out two or more breakfast menus for your family and ask your teacher to criticize them.
5. What do you do to help make breakfast an attractive meal?
6. Explain how to make a fireless cooker and tell how it works.
7. Suggest several foods that may be cooked in the fireless cooker.

LESSON 23

A LESSON ON CEREALS

Using the fireless cooker.

The girls were eager to use the cooker they had made to see how it would work. They had told their mothers about it, and some of the girls were to be allowed to make one at home if the one at school proved to be successful. The lesson on the cooking of cereals was one to which the girls looked forward, and it proved to be a very interesting one. They said later that they had not known that there could be so many interesting things to learn about oatmeal, cream of wheat, cornmeal, and other grains so commonly used.

Their first surprise came when they learned where cereals come from. They had never associated the oatmeal or cornmeal mush served at breakfast with the big grain fields they had talked about and read about, and were especially interested when Mabel White told about the grains

I. What
are
cereals?



FIG. 160. — Miss Ashley showed the girls samples of the cereals used for food.

grown on her father's farm. Miss Ashley had some photographs of several large fields in the "big bread basket" of North America and also several bottles containing the cereals or grains commonly used by man for food. There were samples of wheat, corn, oats,

rye, rice, and barley. She told them that cereals were the seeds of grasses and that some of them have been cultivated for thousands of years.

Some people always think of "breakfast food" when the word cereal is used, but it should not be applied to

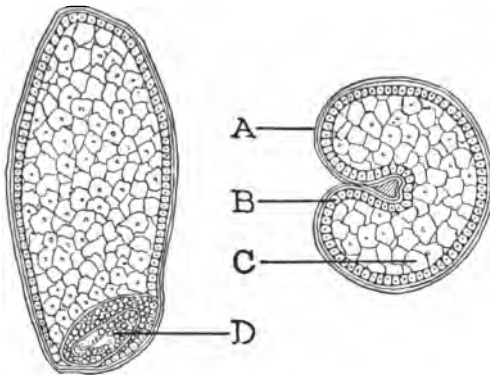


FIG. 161.—Diagram of a grain of wheat, longitudinal and transverse sections. *a*, bran; *b*, aleurone layer; *c*, starch cells; *d*, germ.

breakfast cereals only, since many other food products are made from the same grains. Flour, vermicelli, macaroni, spaghetti, cornstarch, glucose, corn sirup, and many other foods commonly used are all made from

cereals or the grains of certain grasses.

The breakfast cereals that Miss Ashley had on the table looked quite different from the whole grains in the bottles. The rolled oats was in flattened flakes and did not resemble much the grains of oats; the cornmeal was granular and so was the cream of wheat; while the hominy and cracked wheat were in still different form. Then there were some packages containing cereals which were already cooked; some were in flakes, some were "puffed"; while another was in "shredded biscuit"

II. Different forms of breakfast cereals.

form. Such a variety to choose from! One need never grow tired of cereals when there are so many kinds from which to choose. Nearly everyone likes variety and it is well not to use the same kind of cereal every morning.

In composition cereals are very much alike. They all contain a high per cent of starch, some protein, a small amount of fat, and some mineral matter. The largest part of the grain is made up of starch; the protein material lies next to the bran layer and in some of the manufactured

1. What do cereals contain?



FIG. 162. — Wheat products are very important foods.

products much of it may be removed; the fat is found in the germ, which is generally removed, for if allowed to remain it may cause the cereals to become rancid; the mineral matter or ash is found in the germ and outer layers of the kernel, so much of it, too, is taken away in the manufacturing process.

It is well for us to remember some of these things when deciding what cereals to use. The whole kernel,

as in cracked wheat or oatmeal, will give us more mineral material than the ones from which all the bran and germ have been taken. This is especially good to know if vegetables and fruits are not easily obtainable, for the minerals in the cereal may be substituted. Oatmeal is especially rich in iron and when generously used supplies a sufficient amount for the needs of the body.

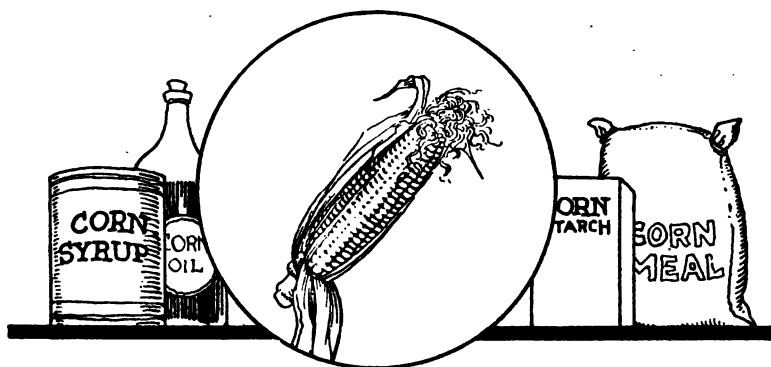


FIG. 163. — Many corn products are used for food.

The food value of all cereals is about the same but the money value differs. As a usual thing the corn and oats products are the cheapest and if one wants to be well fed at little expense cornmeal and oatmeal should be used. A dish of either of these made from a fourth of a cup of the dry meal and served with milk is good for breakfast and is cheaper than as much toast as would satisfy the same appetite.

III. Which cereals shall we use?

The cereals that come ready to eat are more expensive

than those which must be cooked at home. The manufacturer, you see, must be paid for his extra work. Of course the cost of the fuel must be included in the cost of home preparation, but even so the expense is not so great as in the purchase of cereals ready to serve, especially if one has a fireless cooker.

While the class was talking about the composition of cereals Miss Ashley let Margaret Langley perform an interesting experiment before the class. **IV. How shall breakfast cereals be cooked?** Margaret made a little starch, just as she had done in a laundry lesson a few weeks before. She took only a teaspoonful of starch, mixed it with a few tablespoonfuls of cold water, and poured over it about one fourth cup of boiling water, stirring until it was clear. To this she added a few drops of iodine and the mixture turned a beautiful blue. **1. A starch experiment.** Then she dissolved a teaspoonful of sugar in some boiling water and added the iodine. This mixture did not turn blue. She dissolved some salt in another dish and added iodine, but again the blue color did not come. Miss Ashley said that iodine produced the blue color with starch only and that it was used to prove the presence of starch. She let the girls in groups of two test any one cereal they chose to see whether starch was present. Each used only about one half teaspoonful of the cereal, a few tablespoonfuls of water, and a drop of some iodine which Miss Ashley had diluted. What do you think occurred? See whether you can find out.

Before getting the cereal ready for the fireless cooker Miss Ashley performed an experiment for the girls.

2. To prevent cereal from lumping and to cook it uniformly.

She had two small saucepans containing a half cup of boiling water. Into one she poured a tablespoonful of cream of wheat all at once; to the other she added the cereal a little at a time, shaking it into the

boiling water very slowly until all was added. What difference do you suppose the girls noticed after each

dish had cooked a few minutes? The girls liked the appearance of the cereal that was shaken in a little at a time; it had no lumps and Miss Ashley said that it was more evenly cooked. She cautioned the girls not to stir the cereal

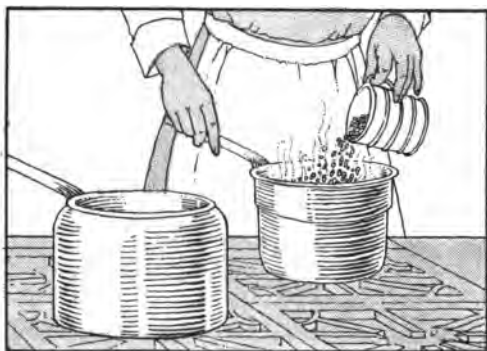


FIG. 164. — Shake the cereal into the boiling water.

A double boiler is a useful utensil for cooking cereals.

while it was cooking since that would make it sticky and spoil its texture. This is especially true of the flaked cereals. It is not necessary to stir much after the cereal has been added to the boiling water if a double boiler is used, or if the kettle is put into a fireless cooker.

The double boiler is a most useful utensil for many

purposes. Cereals which require a long cooking do not need to be stirred when set over the boiling water. The lower part of the boiler should be one third full of water, which should be kept boiling.

3. The use of a double boiler.

All cereals should be cooked in boiling, salted water. The proportion of cereal and water differs according to the kind of cereal used and the form in which it is used. Whole grains and coarsely cracked or coarsely ground grains require more water than finely ground or flaked grains. Proportions ordinarily are: 1 cup of flaked cereal to 2 or 3 cups of water; 1 cup of granular cereal to 3 or 4 cups of water; 1 cup of whole or cracked cereal to 4 or 6 cups of water. A tablespoonful of salt to a quart of water is the usual proportion.

4. General directions for cooking all cereals.

The cereal and the water should be measured. The lower part of the double boiler should be one third full of boiling water; the cereal should be cooked in the upper part of the boiler directly over the stove or flame for about five or ten minutes and then placed over the water in the lower part. The cereal should be shaken into the boiling water so slowly that the water does not stop boiling. The rapid boiling keeps the grains in motion and prevents them from sticking to each other or to the sides of the kettle and gives them a chance to cook evenly. Scarcely any stirring is necessary. The cereal is much more satisfactory if the flakes or granules remain unbroken. This

rapid cooking over the stove bursts the starch grains and the long, slow cooking in the double boiler or in the fireless cooker softens the cellulose and develops the flavor. A well-cooked cereal is a jelly-like mass when put into the serving dish and is indeed delicious and wholesome.

Oatmeal seemed to be the favorite cereal and the majority of the class wished to cook it. Each group of two girls used one fourth of a cup of oatmeal to one cup of boiling water and a fourth of a teaspoonful of salt. They followed the general directions for cooking cereals but instead of finishing the cooking in the double boiler they put all of the oatmeal into one large kettle, brought it to the boiling point again, and placed it in the fireless cooker. Miss Ashley invited the class to come to the kitchen before school the next morning to see how it had cooked.

She also suggested that each girl start the cooking of the cereal for the next morning's breakfast that evening before she washed the dinner dishes, allow it to cook in a double boiler for one hour or more, and let it finish cooking in the morning. One cup of dry cereal when cooked is sufficient for four or five servings but it is just as well to cook enough for two mornings, for it can be reheated. Nearly everyone likes either milk or cream with cereal; some people like to add sugar; others enjoy butter and sugar. Fresh or stewed fruit

5. Cooking oatmeal in class to try the fireless cooker.

6. Cooking cereal at home.

v. Serving the cereal.

is good also. A few raisins, dates, or figs cooked with the cereal give a pleasant change.

Cooked cereal that is left over may be used in a variety of ways. Miss Ashley said that she usually



FIG. 165. — Placing the cereal in the fireless cooker.

put her left-over cereal into

VI. Uses of cold cereal.

muffins; Constance Moore's mother put hers in a dish with square corners so that the slices would be of good shape, then sliced it, dipped it in flour, and fried it for breakfast the next morning; Mrs. Edwards often put her left-over oatmeal into tomato soup; while Mrs. Vincent sometimes molded hers in cups

and served it with stewed fruit or cream and sugar for dessert. Mabel White said that on the farm they used to cook a large kettle of cornmeal mush in the afternoon and have mush and milk for supper, then mold what was left over, just as Mrs. Moore did, and have fried mush for breakfast. This was especially good

for cold winter days. Mrs. White said that she was unable to get the kind of cornmeal that she had been using. The old-fashioned mill in the country where the corn was ground between stones made a better flavored meal than the new "roller process" mills. But the old-fashioned meal did not keep so well because the germ containing the fat was left in. The fat became rancid, especially during warm weather or if the meal was kept in a warm room.

Cornmeal and oatmeal contain more fat than the

VII. Some-thing about buying and caring for cereals.

other cereals and should not be bought in very large quantities.

All cereals should be kept in jars or cans that can be closely covered. Package cereals should not be allowed to stand open on the pantry shelf.

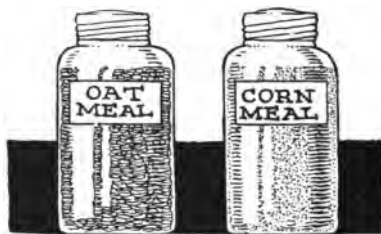


FIG. 166. — Do you keep your cereals in closely covered containers?

The Great War taught us many valuable things, among which were many facts in connection with food.

VIII. Some lessons from the War.

The American people learned to have a very high regard for the value of cereals. They learned that other grains could be substituted for wheat and that many dishes about which they had never known before could be made. Cornmeal, oatmeal, rye meal, barley, and rice were all used in a variety of new ways, and it is to be hoped that

some of the new breads, muffins, cakes, and cookies will not be forgotten.

SUGGESTIONS FOR REVIEW

1. See what you can find out about the early uses of grains for food.
2. Where are the great grain-producing areas of the world?
3. Where is the "bread basket" of North America and why is it so called?
4. How do cereals rank as food?
5. List all the granular breakfast cereals that you know. What cereals come in the form of flakes?
6. Compare the prices of several cereals.
7. Give several reasons for using cereals for breakfast.
8. In what part of the grain is most of the mineral matter found?
9. How can you prove that cereals contain starch?
10. Tell how you would cook cream of wheat.
11. Suggest several ways of using cooked cereal left over from breakfast.

LESSON 24

EGGS AND THEIR PLACE IN THE DIET

What should we know about this important food?

Probably no food is more universally enjoyed for breakfast than eggs. Their delicious flavor and the ease with which they may be prepared make them a favorite food for the morning meal. It is estimated that each person in the United States uses seventeen and one half dozen eggs per year. Is such an important food worth studying about? What are some of the things that we should know?

"Of all the foods that may be studied there is none more wonderful than the egg. Think what it might

become in three weeks' time if given the right temperature! If these eggs," continued Miss Ashley, taking up a dish of fresh looking eggs, "had been put under a hen or into an incubator and had been allowed to stay for three weeks we might have had a flock of downy little chicks."

Eggs must contain something very wonderful in order to produce life like that (Fig. 167). What kind

I. What kind of foodstuffs do eggs contain?

of foodstuffs do you think an egg contains to be able to produce a little chicken, which when it is hatched is able to walk around and to eat just about the same kind of food as its mother eats? This puzzled the girls a little at first, but

when they thought of the little bones and muscles, the skin, feathers, and claws, and the blood that circulated in the body of the chick, they came to the conclusion that an egg must contain all the elements necessary to produce these. There must be good building material there, proteins and mineral matter. And then when they realized that the chicken could walk they knew that there must be some fuel food to produce the power or energy to do this.

Miss Ashley told the class that in the whole egg there



FIG. 167. — An egg must contain something very wonderful to produce life like this!

was almost as much fat as protein, but that in the white there was almost no fat, while the yolk contained almost twice as much fat as protein. She showed them a chart containing these figures :

	WATER	PROTEIN	FAT	ASH	FUEL VALUE PER POUND. CALORIES
Whole egg (white and yolk) . . .	73.7%	13.4%	10.5%	1 %	672
White.	86.2	12.3	.2	.6	231
Yolk	49.5	15.7	33.3	1.1	1643

The class had studied percentage so they understood the meaning of the figures.

The egg yolk, you will notice, is very rich in fat. It is in a very easily digested form, too, which of course makes it a very valuable food.

The ash or mineral matter found in the egg must be of just the right kind in order to produce muscle, blood, and bone. If we could analyze the egg we should find iron, phosphorus, calcium, sulphur, and other minerals, all necessary for building and repairing the parts of the body. Which of these did we find in milk? Which one was not present in milk? Have you had any proof of the presence of sulphur in eggs? Which foodstuff is missing in eggs?

Since eggs contain such good building material and are also a source of energy, their value as a food is very

high. Occasionally they may be used in addition to milk by little children who are just beginning to use other foods; by the sick, whose bodies need to be built up; by persons whose digestions are not strong; and by everybody else as well.

II. The value of eggs as food.

“But, Miss Ashley, we cannot afford to use eggs, they cost so much,” complained one of the girls. Eggs may be high priced, but we may use them in place of meat. All things considered, one dozen eggs have about the same food value as two pounds of lean meat,¹ and the protein and mineral matter in the eggs are so well used by the body that one is safe in saying that eggs are better for most people than meat. Compare the cost of a dozen eggs and of two pounds of round steak. Where there are children in the family, eggs should be used frequently in place of meat.

III. Comparison of the cost of eggs and meat.

Eggs always cost more in winter than at any other season. They are usually cheapest in April, May, and June, when the hens lay best. “When we lived on the farm we always preserved a lot of eggs in May or June so we could have all the eggs we wanted in the winter, for our hens did not lay very many eggs in the cold weather,” said Mabel, who had learned many things while living on the farm.

IV. Storing eggs.

“How did your mother preserve them?” said Miss Ashley.

¹ Food Products. Sherman.

“Mother put several dozen clean, sound, fresh eggs in a big stone jar and poured over them a solution of water glass, then covered the jar and set it in the coolest place in the cellar. She bought the water glass, which is a sirupy mixture, at the drug store and added to it ten times as much water to make the solution. Before we used the eggs we washed them. They tasted good and we used them for all kinds of purposes, but of course we liked the fresh eggs better.”

Many people could preserve eggs this way if they had a cool place to store them. Mrs. Vincent, who knew a farmer in the country, bought fresh ^{v. Buying} eggs from him each week. They were sent ^{eggs.} in by parcel post in small crates, which she returned. These crates held fifteen dozen eggs and Mrs. Vincent and four other women shared them each week.

In the city where so many grades of eggs are on the market one is influenced by the price and the use to which the eggs are to be put. One should know by looking at an egg whether or not it is fresh and should not pay for fresh eggs and get a cold storage product. A fresh egg has a dull-looking shell, rough in texture. Age causes the shell to become thin, smooth, and shiny. Eggs on the market are graded according to freshness, color, size, and cleanliness. The difference in the color of the egg makes no real difference in the value, and should not make a difference in price. The fact that eggs vary in size makes it seem wiser to sell them by weight rather than by the dozen.

Clean eggs are always more desirable than soiled VI. Why eggs, for the shell of the egg is porous and the eggs spoil. dirt on it may have caused it to spoil or to have changed its flavor. Bacteria enter the egg through the shell and do to the egg what they do to other foods. Decay takes place more quickly when eggs are kept in warm places, hence the reason for cold storage. Sometimes eggs spoil because the warm temperature has caused the little chick to develop.

Eggs should always be kept in a cool place in the home. They should not be washed, unless soiled, VII. Car- until just before using, when they may be ing for eggs in wiped off with a damp cloth. All cracked or the home. broken eggs should be used first.

There is ever so much more to be known about eggs but we want to learn something about cooking them.

VIII. How Have you ever listened to the answers given shall eggs to the question "How will you have your be cooked? eggs?" which a waiter asks a guest? Such

a variety of ways as there are! Are eggs cooked in various ways equally digestible? Are hard-cooked

eggs and fried eggs as digestible as poached eggs and omelet? Those who have made a study of this tell us that soft-cooked eggs are probably more *quickly* and more *easily* di-

gested than hard eggs, but that hard-cooked eggs and fried eggs, too, are completely digested. Hard eggs should be well chewed and not eaten too hurriedly. They are more readily broken up into bits in the mouth

1. Shall we use "hard-cooked" eggs and fried eggs?

if they are cooked until they are mealy instead of only tough and rubbery. Long cooking, that is, for about a half hour, in water just under the boiling point, will make them hard and mealy.

Fried eggs take longer to digest than eggs cooked in any other way and should not be given to children or to persons who have difficulty in digesting their food. The fat in which eggs are fried should not be so hot that the white of the egg becomes hard and horny in texture.

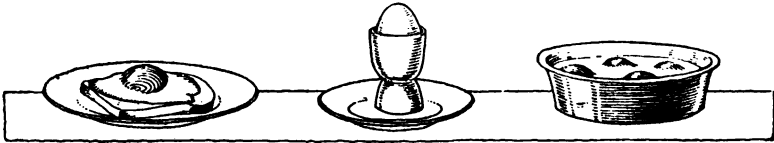


FIG. 168. — How will you have your eggs ?

Soft-cooked eggs are quite generally liked and are most delicate when the entire egg is soft and jelly-like. This jelly-like consistency is obtained when the egg is cooked in water just below the boiling point for about five or six minutes.

2. Soft-cooked eggs.

If cooked in *boiling* water for four minutes the egg will not be of the same consistency all the way through ; the part nearest the shell will be firm but the yolk will run. The method used will depend upon the taste of the person served.

Miss Ashley cooked eggs according to these two ways to show the class the difference. Other ways of cooking eggs are given below.

POACHED EGGS

Have a shallow saucepan two thirds full of gently boiling, salted water. Place in it a few buttered muffin rings. Break fresh eggs into a small dish and slip them into the rings. Cover the pan and stand it where the water will stay hot but not boil. The steam will help to form a white film over the top of the eggs. When the white is firm, remove the eggs carefully with a skimmer to pieces of buttered toast arranged on a hot platter. A bit of butter may be placed on top; a sprig of parsley makes a pretty garnish.

SHIRRED EGGS

Butter individual baking dishes. Break one egg into each. Cover with buttered crumbs and bake in a moderate oven until of the consistency liked. Remember that the egg will continue to cook in the dish after it is removed from the oven.

CREAMED EGGS

Cook eggs until hard and mealy. For three eggs make one cup of white sauce, using 1 cup milk, 2 tablespoonfuls of butter, 2 of flour, and a half teaspoonful of salt. Slice the eggs and add to the white sauce. This may be served on slices of hot buttered toast.

CREAMY OMELET

4 tablespoonfuls butter	1 cup milk
4 tablespoonfuls flour	4 eggs
$\frac{1}{2}$ teaspoonful salt	

Make a thick white sauce out of the butter, flour, and milk; cool slightly. Separate the yolks and the whites of the eggs. Beat the yolks until creamy; add to the white sauce. Beat the whites until stiff and fold them into the other mixture. Pour into a heated, buttered frying pan, spread evenly, and allow to cook very

slowly until firm. (Test with a knife to see whether it is firm.) Then turn one half over the other and roll on to a hot platter.

This makes a very tender omelet and one that will not fall very quickly.

There are very many dishes in which the beaten white of egg is used. Egg white is very elastic and as it is stretched by beating, air is caught in it and it becomes white and fluffy. What happens to this air when heat is applied to such a mixture as the above omelet? What care must one use in cooking an egg mixture in which air is entangled? Why do omelets usually shrink?

The yolks of eggs cannot be made stiff but become creamy when beaten. The least bit of yolk mixed with the white will prevent it from becoming stiff, so one must be very careful in separating the yolks from the whites.



FIG. 169. — An omelet is an attractive breakfast dish.

SUGGESTIONS FOR REVIEW

1. Compare milk and eggs in food values. What has each that the other lacks? What shall we serve with eggs to make up this lack?
2. Prove that eggs furnish good building material for the body.
3. Why are eggs good food for schoolgirls?
4. Tell when and how you would store eggs for winter use.
5. How can you tell fresh eggs on the market?
6. What happens to an egg when it is cooked?
7. What makes it possible to beat the whites of eggs until they are stiff?

LESSON 25

A BREAKFAST BEVERAGE

Shall we learn to make coffee?

Yes indeed, the very best that may be made, for it is so generally used as a breakfast beverage that everyone who prepares the meal should know how to make good coffee.

Miss Ashley taught the girls how to make coffee the afternoon that there was a mother's meeting at the school. They made dainty sandwiches to serve with it.

You might not think that there is much of interest connected with the fragrant brown beverage, but, like the study of all other things that we use, the study of coffee is interesting and makes one realize again how many different countries contribute to our tables.

Do you know where the coffee used in your home this morning came from? It may have come from Cuba, Porto Rico, Mexico, Central America, or South America, or possibly it may have come from Arabia, Java, Ceylon, Sumatra, or other islands in the Pacific Ocean. In all probability it came from Brazil or Central America. Brazil now produces about three fourths of the world's supply of coffee and is the most important coffee market in the world.

Coffee undergoes many processes of manufacture before it comes to the kitchen. The brown beans which we most frequently see were once grayish green berries. Two of these berries lie with their flat sides together in a fleshy fruit not unlike a cherry. This cherrylike fruit grows

**I. Where
is coffee
grown?**

**II. How
coffee is
produced.**

on a shrub four to six feet high. When the fruit is dark red it is ready to be picked, or is allowed to fall. The "cherries" are spread out and in a few weeks' time the pulp dries and is removed. A thin silver skin surrounds the two coffee beans and this, too, must be removed. After a thorough drying and freeing of all husks and hulls the beans are sorted and graded. They are then put into bags and sent to a shipping port. The grayish green beans must be roasted in order to develop the flavor, but this is not done until they reach the country where the coffee is to be used.

Mrs. Edwards used to buy the green beans and roast them herself by putting them in a slow oven, stirring them occasionally to brown them evenly.

She was careful to roast them to a good cinnamon brown and after cooling them she put them into a jar or can with a close-fitting cover.

Manufacturers now roast coffee so satisfactorily that not many housewives do it at home.

Mrs. Edwards still grinds her coffee at home. She prefers to buy the whole bean rather than the ground coffee, in order to preserve the aroma, and she buys



FIG. 170. — Coffee grows on a shrub four to six feet high.

only about a two weeks' supply for her family. The pleasant fragrance of freshly ground coffee and of coffee being made is due to a certain oil which has been developed through the roasting process. This is a volatile oil and since it gives coffee its delicious flavor should not be allowed to escape. Hence the need for keeping roasted coffee, and especially ground coffee, tightly covered.

In addition to the *cafféol*, which is the name given to the oil, coffee contains a stimulant, called *cafféin*, and

III. Buying coffee. **IV. What does coffee contain?** tannic acid. Those who use coffee like to have some of the

cafféin dissolved out of the ground bean, but it is not desirable to have any of the tannic acid in the beverage. It happens that *cafféin* comes out in a few minutes' boiling, while tannic acid is dissolved out by longer boiling. The

cafféol escapes very quickly when heat is applied and since it is responsible for much of the pleasant flavor, what care should one take when making a pot of coffee?

Perhaps the most common way of making coffee is to boil it. However, percolated coffee and filtered

V. Some ways of making coffee. coffee are coming into more general use than formerly. The amount of coffee used depends upon the fineness to which it is ground and upon the way it is made, but most of all it depends

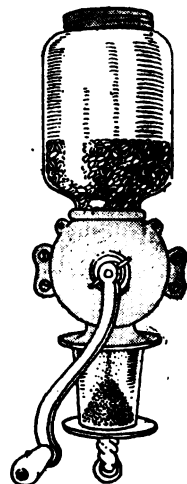


FIG. 171.—Mrs. Edwards grinds her coffee at home.

upon the taste of the one who is to drink it. It is more economical to have the coffee ground rather fine. As a usual thing in making a pot of coffee one heaping tablespoonful of coffee is allowed to each cup of water. A cup of ground coffee is sufficient to make seven or eight cups of the beverage of average strength. In making this amount of boiled coffee half an egg slightly beaten, to which a little cold water has been added, may be mixed with the grounds before adding the boiling water. The egg not only clears the coffee but seems to add to the flavor.

BOILED COFFEE

To one pint of water allow two rounding tablespoonfuls of coffee. Put the coffee into the pot and add a half teaspoonful of egg mixed



FIG. 172. — Be sure the coffee is hot when served.

with a little cold water; mix well with the coffee. Pour over this the pint of boiling water, stir thoroughly, and allow to boil for three or four minutes. Pour some of the coffee into a cup to free the spout from grounds. Pour it back into the pot. Add a quarter of a cup of cold water to clear it and set the pot where for ten minutes

it will remain very hot but will not boil. Coffee should be served very hot.

PERCOLATED COFFEE

Put the finely ground coffee into the perforated receptacle in the percolator. Pour boiling water into the lower part of the pot

and place on the stove. The boiling water will soon spurt up through the top of the small tube provided for the purpose and will filter through the ground coffee back into the pot. This process should be allowed to continue until the coffee is of the desired strength. Ten or fifteen minutes are usually allowed.

Tastes differ when judging coffee; some people like it strong, some weak, and others just medium, but nearly all are agreed that good coffee should give off the characteristic fragrant aroma, should be of clear, amber-brown color, and should have the pungent coffee flavor. No grounds or sediment of any kind should be found in the cup.

Coffee differs in flavor according to the brand used and according to the way it is made. Sometimes coffee as purchased is adulterated with chicory, peas, beans, or cereals, and various foreign flavors are produced.

One of the most important things to consider in the making of good coffee is the coffee pot. A porcelain lined or a graniteware pot is suitable. It should be of the simplest construction so that it may be kept scrupulously clean without too much effort. In choosing a coffee pot avoid one with seams or ridges or crevices in which sediment of any kind may accumulate (Fig. 174). No grounds or coffee should be allowed to remain in the pot after the

VI. What is good coffee?

VII. Adulterants are sometimes added.

VIII. The coffee pot.



FIG. 173. — Cross section of a coffee percolator.

meal. The pot should be emptied, washed thoroughly, scalded, and dried after each using.



FIG. 174. — Coffee pots of simple construction.

SUGGESTIONS FOR REVIEW

1. How would you make a pot of coffee to serve to six of your mother's friends?
2. Give your reasons for making it as you suggest.
3. In what way does the making of tea differ from the making of coffee?
4. What care should be given to the coffee pot? What kind of pot would you buy?
5. How should you care for coffee when it comes from the grocer's?

LESSON 26

ANOTHER LESSON ON FRUIT

The Sunnysiders learn how to prepare and serve fruit for breakfast and for other meals.

The average American family does not use enough fruit, so Miss Ashley and her classes decided to do all that they could to encourage their families and their friends to use this valuable form of food more generously.

“Of course we must be able to give some good reasons for using fruits in the diet if we expect anyone to be






A 	WATER	84.6
	PROTEIN	0.4
	FAT	0.5
	CARBO- HYDRATES	14.2
	ASH	0.3
	FUEL VALUE PER POUND	290. C
B. 	WATER	77.4
	PROTEIN	1.3
	FAT	1.6
	CARBO- HYDRATES	49.2
	ASH	0.5
	FUEL VALUE PER POUND	450. C
C 	WATER	86.9
	PROTEIN	0.8
	FAT	0.2
	CARBO- HYDRATES	11.6
	ASH	0.5
	FUEL VALUE PER POUND	235. C
D 	WATER	75.3
	PROTEIN	1.3
	FAT	0.6
	CARBO- HYDRATES	22.0
	ASH	0.8
	FUEL VALUE PER POUND	460. C
E. 	WATER	92.4
	PROTEIN	0.4
	FAT	0.2
	CARBO- HYDRATES	6.7
	ASH	0.3
	FUEL VALUE PER POUND	235 C

FIG. 175. — Study this chart.

convinced that more should be used," Constance suggested at the beginning of the lesson. The girls had already learned of the value of fruit to the body and had reviewed some of the facts learned by reading the assignments that Miss Ashley had made.

Miss Ashley constantly looked through magazines, papers, and books for articles which would be of help and interest to her classes, and the girls, too, were in the habit of bringing to their reading table or bulletin board anything that they thought worth while. As a result, when a new subject was to be studied, or an old one reviewed, there were always sources of information and the girls took pride in being able to make contributions to the class discussions. They pooled their knowledge, as it were, and each was benefited by what the other gave. In the fall when they canned

fruits the girls were more interested in the canning process than in the study of the fruits themselves. Now they became very much interested in what the fruits contained and in ways of preparing and serving them.

I. General composition of fruits.

By studying the chart which hung on the wall (Fig. 175) they found that the general composition of fresh fruits was very much the same. They were surprised to find that the banana, which seemed so solid, was 75 per cent water, and that the apple contained even more water. One of the girls grated a cupful of apple, put the pulp into cheesecloth, and squeezed it as hard as she could. She got a little more than three fourths of a cupful of apple juice, and in the cloth there remained the skin and other fiber. The juice was real apple cider. You all know its taste. You have all squeezed oranges, lemons, grapefruit, grapes, berries, and melons and know how much water they contain.

1. Fruit contains much water.

The water in itself is good for the body but we do not need to buy fruit for the water it contains. Fruit juice is valuable because it contains certain acids, mineral salts, and vitamins that the body needs.

Can you recall the names of any of the mineral materials needed by the body? Which food that you have studied is the best source of calcium, commonly called lime? Do you know which foods provide iron? Which provide phosphorus? Fruits, too, provide these important

2. Fruit contains mineral salts and valuable acids.

mineral salts and others as well, and because the body has such great need of them it is highly important that fruit be used.

The acids that fruits contain are also of great value in keeping the blood pure and in maintaining the secretions of the body in proper condition. You have studied in your physiology and hygiene classes that the various organs of the body perform certain kinds of work, — for example, the glands in the mouth and in the stomach make the fluids or juices that help to digest the food. These fluids must be of the right composition in order that they may do their work well; fruit acids help to keep them in good condition and hence keep the body well.

In addition to the mineral salts and vegetable acids there are the *vitamines*, which are very important.

This word may not be familiar to you. **3. Vitamines are found in fruit.** Vitamines are substances found in certain foods, without which the body cannot be

kept in good health. Some are found in milk, vegetables, and fruits. By eating a variety of fruits and vegetables, especially when we do not use a great deal of milk, the body is more likely to be well supplied with these necessary substances.

The laxative substances found in fruit also make it valuable to the body. The mineral salts and acids **4. Laxative properties of fruit.** help to give fruit its laxative qualities but there are in addition to these other substances which have a laxative effect upon the digestive tract.

This is one of the best reasons for using fruit in the morning. Oranges, apples, prunes, figs, and other fruits too, are especially valuable as breakfast fruits because of their laxative properties.

Fiber or cellulose such as remained in the cheesecloth when the apple pulp was squeezed is found in all fruit, and while it does not have fuel value it is of value to the body in that it provides bulk and helps to keep the more concentrated food from forming compact masses in the intestines.

5. Fiber serves a purpose, too.

This makes it easier for the digestive juices to get at the food and for the waste to pass along the tract. We sometimes say that this rough or coarse material acts as a "scourer" or cleansing agent by helping to overcome constipation.

In addition to its value in keeping the body in good condition fruit has fuel value also, although you will see at once by looking at the charts that a pound of fruit does not give as many calories as a pound of meat or a quart of milk. (See pages 301-2.) Yet fruit is heavy for its bulk and when we eat a large apple, or half of a grapefruit, or four prunes, or four dates, we get practically the same amount of fuel as when we take five eighths of a glass of milk, or one very large egg, or a dish of cooked oatmeal made from one fourth of a cup of oatmeal (Fig. 176). One does not get the same *kind* of fuel in fruit that one gets in eggs and milk, nor is it the same that one gets in cereals. The fuel is largely carbohydrate

6. Fruit also has fuel value.

in the form of sugar. The small percentage of fat and of protein do not make much difference.

It would be interesting for you to find the cost of each one of these portions of food to see which is the most expensive. In all probability the fruit will be high priced in winter and many people will think that they cannot afford to use it. If fresh fruit is too expen-

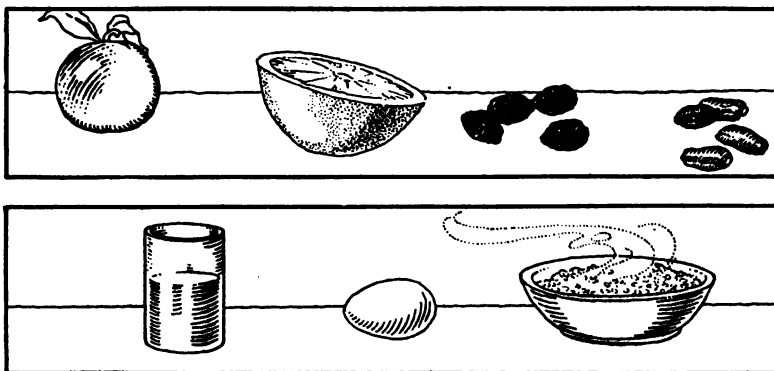


FIG. 176. — Portions of food having practically the same fuel value.

sive, dried fruit may be substituted. Those who have canned fruit in the summer and fall will be glad to use what is in their fruit cupboards.

In the summer and early fall fruit is usually plentiful and is cheaper than in the winter, and it should be used in generous amounts. We are fortunate to live in a country that produces a great variety of fruits. As one goes into the markets both in summer and in winter many different kinds may be seen. With such good transportation facilities

II. The
use of
fresh
fruits.

as we have it is not difficult to ship fresh fruits from one place to another. Sometimes they are allowed to ripen in transit. As a usual thing the flavor of fruits is better when the fruit ripens naturally. Strawberries in the northern markets in February and March do not have the delicious flavor of native strawberries, nor do peaches which are picked when only half ripe have the fine flavor of peaches allowed to ripen on the tree.

Fruits are at their best when thoroughly ripe, and ripe fruit only should be eaten raw. In the ripening process the starch in the fruit is changed to sugar, the amount of acid decreases, and the fiber is softened. The cooking of unripe fruit does practically what the sun does in

1. Ripe
fruits only
should be
eaten raw.

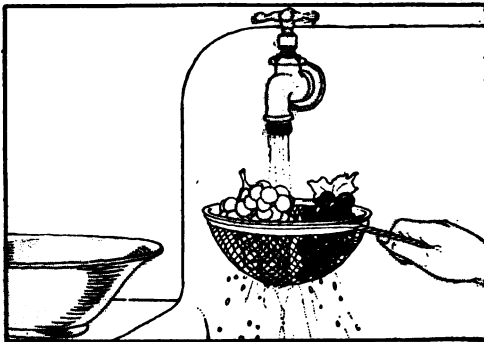


FIG. 177. — Fruit should be washed before serving.

the ripening process. Unripe apples in the early summer, which would cause illness if eaten raw, are very wholesome when cooked. What changes have been brought about through the cooking process?

Bananas, which are altogether too frequently eaten before they are well ripened, would be much improved by cooking. Do you know why? The body makes no

use of raw starch and we should be careful not to take it into our stomachs.

All fruits that are eaten raw should be thoroughly washed. One never

2. Fresh fruit should be washed before serving.

knows what has come in contact with the fruit through

the handling or from exposure to the dirt and dust of the streets.

Even oranges, grapefruit, lemons, bananas, and melons, whose skins are to be discarded, should be washed and wiped to remove surface dirt. Small fruits such as grapes and berries should be thoroughly rinsed just before serving; they should never be allowed to stand in water.

All fresh fruit lends itself to attractive service; its

3. Serving fruit.

pleasing appearance, as well as its

delicious flavor, stimulates the appetite and aids digestion. It is more palatable and refreshing when chilled before serving. It is better to put it into the re-

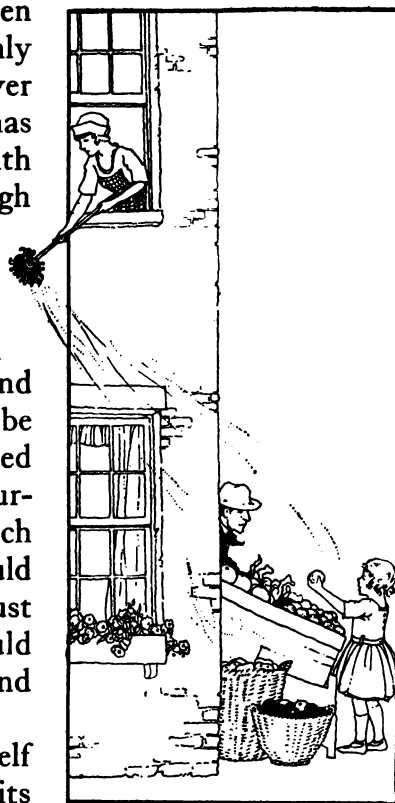


FIG. 178. — A good reason for washing fruit.

frigerator or some other place to get cold rather than to have ice come in contact with the edible portion. Too intense cold very often destroys the natural flavor. When several kinds of fruit are served in one dish a little care in arrangement is worth while. Fresh leaves, such as grape, peach, or strawberry leaves, make the basket or bowl attractive (Fig. 179).

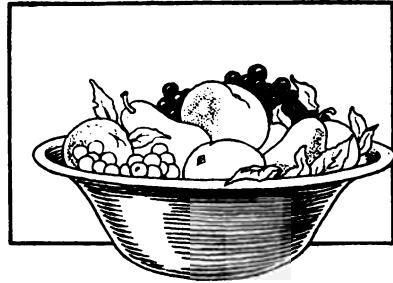


FIG. 179. — Fruit should be arranged attractively.

If fruit needs to be pared or cut at the table, a silver knife should be provided, and finger bowls should be used. It is well to use paper napkins instead of linen when fresh fruits are prepared at the table, for fruit juice stains are sometimes difficult to remove.



FIG. 180. — Finger bowls and paper napkins prevent fruit-stained linen.

Fruits may be made more convenient for eating by special preparation before serving. *Oranges and grapefruit* may be cut into halves, the seeds and the pith

removed, and the sections loosened. There are regular grapefruit knives on the market which are convenient

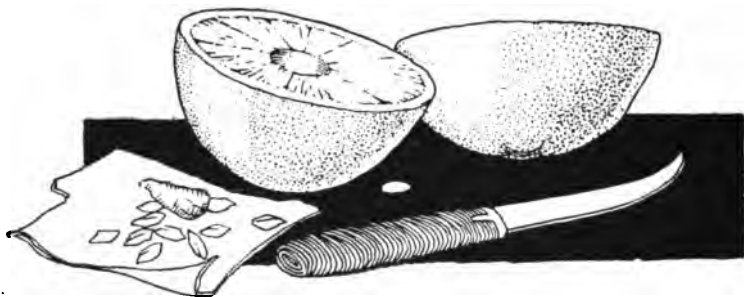


FIG. 181. — A convenient knife for preparing grapefruit.

in preparing this popular fruit. *Orange juice* served with cracked ice is a delicious and refreshing drink for breakfast (Fig. 182).

Bananas should not be prepared until just before they are served, since they discolor very readily. However, the addition of lemon juice will prevent this.

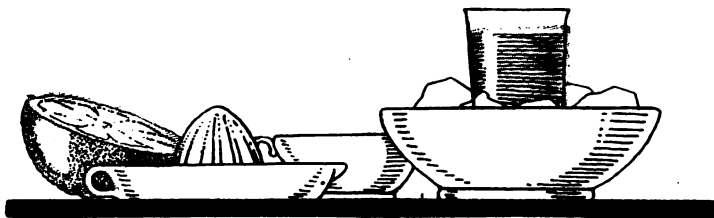


FIG. 182. — Chilled orange juice is delicious and refreshing.

Bananas may be cut in two lengthwise and be served in the skin or the skin may be removed and the fruit cut into slices. They are good served with cream and

sugar. We should remember that if bananas are to be eaten raw they should be very ripe. They should be well masticated. When used for breakfast it is well to serve them with the cereal.

Peaches, so generally eaten raw, should be peeled and sliced just before serving, for they, too, discolor very quickly. A silver knife should be used.

Apples, apricots, pears, and plums are usually served whole. The tough skins should not be eaten by children.



FIG. 183. — Small fruits should be spread out on a flat dish.

Muskmelons and cantaloupes should be cut in two and the seeds removed. They should be very cold, but ice should not be placed in the fruit.

When serving *grapes* cut the bunches into convenient sizes. It is safer not to eat the seeds.

All berries should be very fresh if eaten raw. When purchased they should be removed from the box and spread on a large plate or platter. Any overripe or decaying fruit should be removed at once. Even though the flavor is slightly impaired, berries should be washed. They may be put into a colander and washed by allowing a stream of fresh water to run over

them (Fig. 177). The stems of strawberries should not be removed until after the berries have been washed.

Cooked fruit is also very acceptable to most people. For certain people cooking the fruit increases its digestibility. Cooking softens the skin and fiber, decreases the acidity, and develops new and pleasant flavors. Cooking also destroys bacteria and makes it possible to keep the fruit for a longer time. When paring and slicing such fruits as apples, pears, or peaches it is well to drop the pieces into water to prevent discoloration. Fruits should be cooked in earthen or graniteware utensils rather than in tin or aluminum. Do you know why?

Fruits should be cooked slowly and if the minimum amount of sugar is to be used it should be added when the fruit is done as the action of the acid on the sugar makes it less sweet. However, the fruit is richer and the pieces will retain their shape better if cooked in a sirup.

It is not always possible or desirable to purchase fresh fruits. During the winter months fresh fruit is frequently too high in price to be bought in any quantity. It is at such times that the housewife is happy to have a supply of canned and dried fruits in her closet. The canned fruit is all ready for use but the dried fruit must first be very carefully prepared.

All dried fruit should be very carefully washed in warm water and should then be allowed to soak for several hours, even overnight, to replace the water

4. Cooking fresh fruits.

III. The use of dried fruits.

that was lost in the drying process. It should be cooked in the water in which it soaked. Long, slow cooking until the fruit is plump and soft gives the best results. A little sugar may be added or not as desired.

Dried prunes, apricots, peaches, apples, and figs all make palatable fruit dishes, especially for breakfast.

The Sunnysiders were very anxious to cook some of the fruit that they had dried in their homemade fireless cooker. They

decided to use some of their dried peaches and got them ready as Miss Ashley suggested. Since the peaches had to soak



FIG. 184. — Mrs. Edwards gives prune pulp to Baby Dorothy. This is the way she makes it.

overnight, Constance volunteered to come to class early to bring them to the boiling point and set them in the cooker to give them the long, slow cooking. At the close of the lesson there was a large dish of well-cooked peaches. They didn't look very much like the hard, shriveled pieces of fruit which the girls had taken from the paper carton. The class was quite surprised. "To think that we dried the fruit and made the fireless cooker, too!" exclaimed Margaret.

Mrs. Edwards told Constance that she kept cooked prunes on hand nearly all the time. She gave prune

pulp to baby Dorothy and to John Jr. Mrs. Edwards said that she always washed the prunes, and soaked them as Miss Ashley had told the girls to do, but that instead of putting them into the fireless cooker to finish cooking she allowed them to cook on the stove for a few minutes and then set them on a hot radiator to become soft and plump. In this way she saved gas.

IV. Preparing some fruits to serve for breakfast.

The girls enjoyed preparing various fresh fruits and were also given their choice of cooking fruits according to some of the following recipes which Miss Ashley distributed. Which of these recipes would you like to try?

BAKED APPLES

Choose good, tart apples of uniform size. Wash thoroughly. Remove the cores without breaking the apples and arrange in a baking dish. Fill the holes with sugar and bits of butter. Put enough water in the pan to cover the bottom; cover the pan, set into a moderate oven and cook until the apples are tender.

Cinnamon or nutmeg may be mixed with the sugar before filling the centers, or the centers may be filled with raisins and chopped nuts for variety.

APPLE SAUCE

Tart apples make the best sauce. Wash, pare, and quarter the apples; cover almost entirely with water and cook until very soft. Add as much sugar as is desired to sweeten them. Mash or not as is preferred.

If you want the pieces of apple to remain whole, you may cook them very slowly in a sirup made by boiling one cup of sugar and one cup of water together for about five minutes. A little lemon rind added to the sirup gives a pleasing flavor.

BAKED BANANAS

Wash and wipe the bananas. Cut off about three fourths of an inch from each end. Arrange in a baking dish and bake about twenty minutes or until the skins become very dark in color.

They may be served in the skins or may be removed and served hot sprinkled with sugar.

STEWED PRUNES, DRIED APPLES, OR DRIED APRICOTS

1 pound dried fruit

Cold water

$\frac{1}{3}$ to $\frac{1}{2}$ cup sugar (as desired)

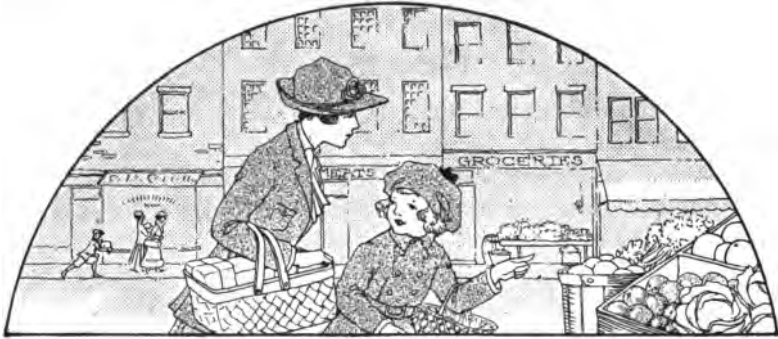
Pick over the fruit, wash carefully in lukewarm water, and cover with cold water. Heat gradually in the water in which they have soaked, and cook slowly in a closely covered vessel until very soft. Let the water boil away until the sirup is thick. Sugar may be added if liked. Lemon juice improves the prunes and apples.

STEWED DATES

Pick over and wash the dates in cold water; dry on a clean cloth. Remove the seeds. Cover with cold water and cook slowly until tender. Let the water boil away until the sirup is thick. This makes a nice dessert, or the dates may be served with a cereal for breakfast.

SUGGESTIONS FOR REVIEW

1. What foodstuffs does fruit contain ?
2. Why is fruit so valuable as an article of food ?
3. Why should raw fruits be washed before serving ?
4. What effect does cooking have upon underripe fruits ?
5. Which is the cheaper — a pound of fresh apples or a pound of dried apples ? See whether you can find out which yields the higher food value.
6. Give directions for cooking dried fruits.



CHAPTER VI

THE PREPARATION OF DINNER DISHES

The Sunnysiders decided one day to ask Miss Ashley to let them cook some dishes that would be especially acceptable for dinner. They had been quite faithful about helping with the home breakfasts, as their home reports showed. Many of them had cooked three or four cereals, had made several egg dishes, had repeated some of the quick breads learned in the luncheon lessons, had prepared fresh and dried fruits, and had made cocoa and coffee. Some of the class had cooked and served entire breakfasts on Saturday and Sunday mornings when they did not have to hurry to school. So when they suggested that they would like to help with the Saturday and Sunday dinners Miss Ashley was ready to help.

LESSON 27

PLANNING MEALS

Are you eating the right amount of food ?

A Study of 100-Calorie Portions

What shall we have for dinner? That is a question that is asked in thousands of homes daily. It is an important question, too, and must be answered wisely by every home maker. The Sunnyside girls, when asked this question, recalled the talks they had had together and decided that the needs of the body should always be kept in mind. They knew by this time that a well-planned meal should contain fuel foods, building foods, and regulating foods. They also knew what foods to choose to supply the body's needs. But they were not very sure about the amounts of food required.

One of the most important things, Miss Ashley said, is to know *how much* food is needed. The *kind* of food one eats makes a very great difference in one's health, but the *amount* eaten is also an important consideration.

I. How
much food
do we
need ?

How much food do we need for dinner? Well, that depends upon what we have eaten at other meals during the day. Each person seems to require a certain amount of food daily, and the amount eaten at any one meal depends upon the other two. As a usual thing more food is eaten at dinner than at luncheon and a little more at luncheon than at breakfast. Ordinarily the one who prepares the meals does not plan very accurately

just how much food is needed ; she usually learns by experience how much of certain things the different members of her family eat, and buys and cooks accordingly.

“But my father says that there is a way of telling just exactly how much food a person needs each day, and a way of knowing whether or not he is eating the right amount,” suggested Natalie. She continued, “One evening mother and father went to a lecture on Food Conservation. The lecturer said, ‘Be sure to eat all you need but no more.’ She said that women should be able to estimate rather accurately the amounts of food needed by their families and that a little study would enable them to be sure that each person was getting all that was necessary. Father says that I am under weight because I do not eat enough and that he is over weight because he eats too much. So we are going to try to even up things in our family. We are having lots of fun planning and talking about it.”

“Wouldn’t it be interesting to know whether each of us is eating just about the right amount of food?” remarked Miss Ashley when Natalie finished.

“But how can we find out?” was Natalie’s first question.

A great many men and women have been and are working on the answer to that question and are able to give us much help. They have found out that these human working machines, our bodies, need a required amount of fuel or food to keep them going, just as an automobile or an engine requires a given

amount of gasoline or coal to run a given number of miles. The chauffeur and the engineer must know their engines and must know also what fuel will give the best results and just how much of it is needed. Just as fuel in the engine produces heat, so the food in our bodies produces heat, and this heat is set free in the body and becomes the source of power or energy.

1. The human machine requires a definite amount of food.

Scientists have found a way of measuring the amount of heat or energy that the body requires in order to do

its work, and they have given us their results. They have also found out how much heat given amounts of food will produce when burned.

2. Food values are measured in terms of heat.

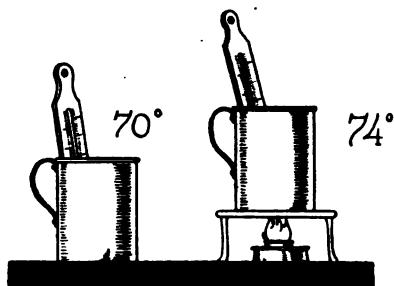


FIG. 185.—A calorie is the amount of heat necessary to raise one pound (about a pint) of water four degrees Fahrenheit.

When we think of the value of food to the body we must think in terms of heat or energy. “How much heat does the body

need?” and “How much food will supply this heat?” are two questions that must be considered.

Of course if heat is to be measured there must be a unit of measurement. When we measure cloth we use a yardstick; when we measure milk we use a quart measure; when we measure heat we use the *calorie* (Fig. 185). You know what the

3. What is a calorie?

yardstick is and have seen a quart measure, but many of you may not know what is meant by a *calorie*. *A calorie is the amount of heat necessary to raise one pound (about a pint) of water four degrees Fahrenheit; or two and two tenths pounds (about a quart) of water one degree Centigrade.* The calorie is the unit used to measure heat and we must think in terms of calories when we think of food values and the food needs of the body.

Experts can tell us just how many calories we need daily. Men, women, girls, and boys need different amounts, depending upon their size, shape, age, and the amount of work they do.

4. How many calories does an eighth-grade girl need?

“Do they know about how many calories I need?” asked Natalie.

“Yes, they estimate that a girl thirteen to fourteen years old needs from 1950 to 2250 calories¹ daily.”

“And how can I tell whether I am eating that amount?”

“The best way is to estimate the number of calories eaten at each meal for several days and to see what the total for each day is.”

It is not easy to measure the amount of food that will give an individual one calorie, so our scientists have given us another unit of measurement to be used in estimating food values. This unit is called the *100-Calorie Portion* or *Standard Portion*. A great many foods have been analyzed and measured and many lists of 100-calorie portions have

5. The 100-calorie portion.

¹ Food-Fuel for the Human Engine. Fisk.

been prepared for us. By becoming familiar with the lists and by taking a little trouble to figure we can know in a general way whether or not we are eating enough.

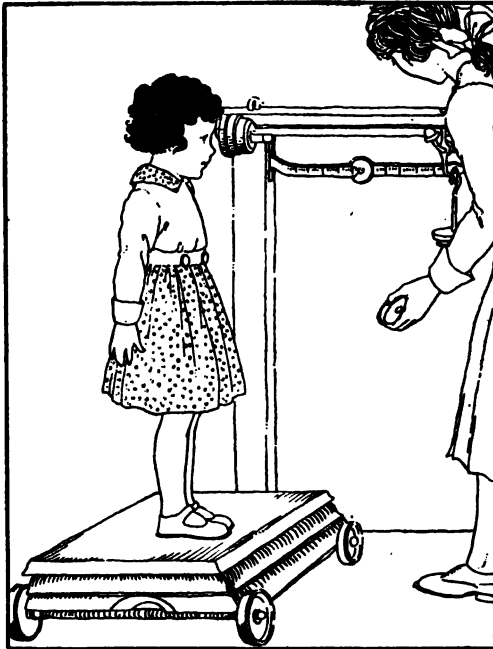


FIG. 186. — Are you the right weight for your age and height ?

In all probability the girls who do not weigh what they should are not eating enough of the right kind of food.

In order to give the class a better notion of the calorie value of some

6. An exhibit of 100-calorie portions was prepared.

of the common foods Miss Ashley had prepared a list of 100-calorie portions which she had also weighed and measured and

had on exhibit. She had placed foods of a kind together and had arranged them very attractively. The girls spent a long time looking and talking and asking questions. No one was more interested than Natalie, for she kept thinking what a lot of things she could tell her father.

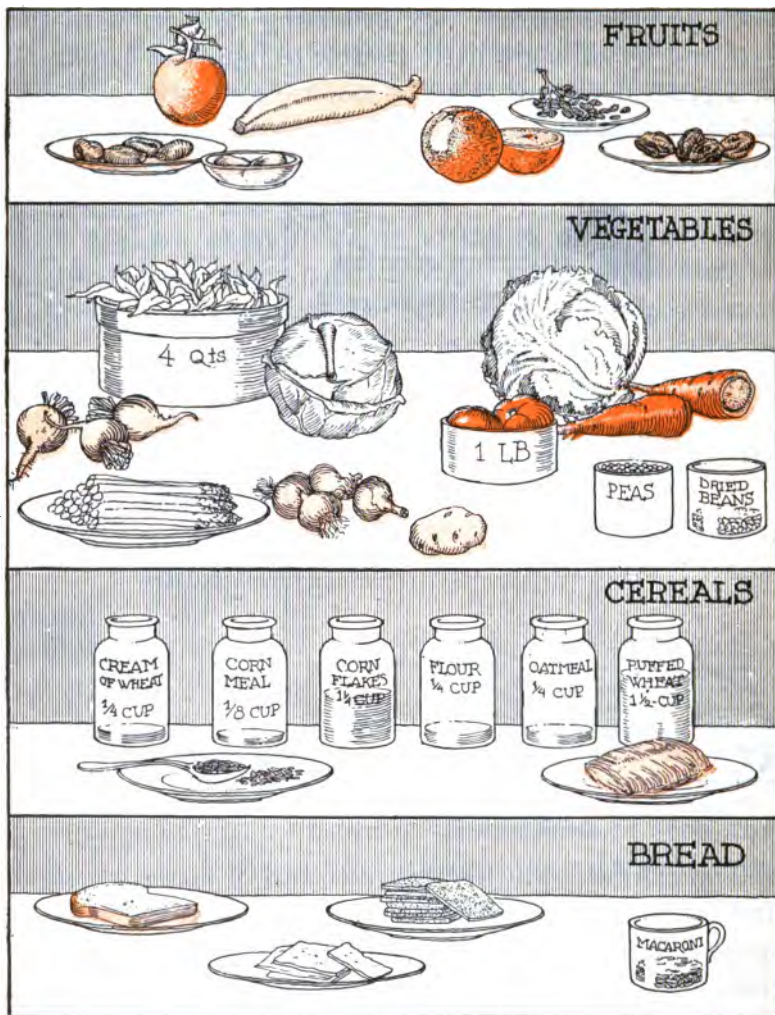


FIG. 187. — 100-calorie portions of some of our common foods. A part of Miss Ashley's exhibit.

The typewritten list that each girl carried home was similar to the one below, and a part of the exhibit may be seen in the accompanying picture (Fig. 187).

100-CALORIE PORTIONS OF SOME OF OUR COMMONLY USED FOODS

FRUITS

Apples	1 large
Bananas	1 large
Dates	4
Figs, dried	2
Oranges	1 large, or 1½ medium
Prunes	4 to 5
Raisins	25 or 30

VEGETABLES

Asparagus, canned	20 to 25 stalks
Beans, dried	2 tablespoonfuls
Beets	3 medium
Cabbage	1 medium head, about ¾ lb.
Lettuce	1 large head, 1½ lb.
Onions	3 or 4 medium
Peas, canned	1 cup drained
Potatoes	1 medium
Spinach	4 qt.
Tomatoes, fresh	1 lb.
Turnips	2 to 3 medium

CEREAL AND BREAD

Cream of wheat	¼ cupful
Cornmeal	⅛ cupful
Corn flakes	1¼ cupfuls
Flour	¼ cupful

CEREAL AND BREAD (*Continued*)

Oatmeal, dry	$\frac{1}{4}$ cupful
Puffed wheat	$1\frac{1}{2}$ cupfuls
Shredded wheat	1 biscuit
Rice, dry	2 tablespoonfuls
Bread, white	1 slice, 4 in. square, $\frac{1}{2}$ in. thick
Crackers, Graham	8, 2 in. square
Crackers, soda	$3\frac{1}{2}$
Macaroni	$\frac{1}{4}$ cup broken into 1 in. pieces

BUILDING FOODS

Cheese, American	1 oz. (about a $1\frac{1}{2}$ in. cube)
Eggs	$1\frac{1}{2}$ (an egg yields about 67 calories)
Milk	$\frac{5}{8}$ cupful (1 qt. yields 675 calories)
Lamb chops, loin, edible part	1 oz. (1 small chop)
Round steak, medium fat	2 oz.
Bluefish	$\frac{1}{4}$ lb. (edible part)
Oysters	10 to 12

FATS

Butter	1 tablespoonful
Cream, medium	2 tablespoonfuls
Olive oil	1 tablespoonful

SWEETS

White sugar	2 level tablespoonfuls
Loaf sugar	4 lumps
Molasses	1 tablespoonful

Miss Ashley asked the girls whether they could select from the exhibit or from the lists foods which

would be suitable in kind and amount for an eighth-grade girl for one day. It was not a difficult thing to do. Each girl's list differed from every other one. Natalie chose the following for one day's supply. What do you think of her choices? Are all of the different kinds of food that the body needs represented? What about the total number of calories? Because she is under weight Miss Ashley asked her to plan to use a few hundred calories more than the amounts generally suggested. (See page 305.)

Suppose you choose from the above list the foods which you might eat in one day.

NATALIE'S LIST OF FOOD FOR ONE DAY (FIG. 188)

FOOD	CALORIES
1 quart milk	675
1 apple	100
$\frac{1}{4}$ cup oatmeal	100
$\frac{1}{4}$ cup medium cream	100
4 tablespoonfuls sugar	200
1 egg	67
4 slices bread	400
4 tablespoonfuls butter	400
1 potato	100
1 lamb chop	100
$\frac{1}{2}$ cup peas	50
4 leaves lettuce	10
1 small tomato	25
1 tablespoonful olive oil	100
4 Graham crackers	<u>50</u>
Total	2477

Which of these foods do you think Natalie would eat for breakfast? Which for lunch, and which for dinner? In what ways do you suppose she will use that quart of milk? Do you think she will gain in weight if she uses that much milk each day? She might use even more, and more eggs and cream would also be good for her.



FIG. 188. — Natalie's choice of food for one day.

In distributing the total number of calories of food for the day about one fourth of the day's supply is used for breakfast, one third for luncheon or supper, and the rest for dinner. See whether you can help Natalie to arrange the three meals.

If it is possible to estimate the amount of food that one member of the family needs in terms of calories, would it not be possible to do it for the entire family? Of course we would have to know how many there are in the family, their ages, weights, and occupations in order to be very accurate. We are told that an average family of five, consisting of father and mother and three

7. How many calories for the entire family?

children, should use from 10,000 to 12,000 calories daily. The following table will give you an idea of the needs of a certain family. The father is a bookkeeper, the mother does her own housework, two children are in school and do their share both of work and of play, and of course the little boy does what all little boys should do.

FOOD REQUIREMENTS FOR A DAY

MEMBERS OF FAMILY	AGE	WEIGHT, LBS.	TOTAL CALORIES
Father	40	154	2,750
Mother	38	120	2,160
Girl	12	75	2,200
Boy	7	48	1,700
Boy	3 yr. 6 mo.	36	1,450
Total requirement			10,260

It may be interesting to plan just what kind and how much food will be necessary to supply this family's needs, or possibly to plan for the needs of your own family.

Miss Smith, the mathematics teacher, who was present at the exhibit and who was always interested in all kinds of problems that the girls met in their home-making classes, suggested that the girls do this work in their arithmetic class. They all agreed that this would be a good plan.

Miss Ashley added that in order to make the work

most worth while the *cost* of the day's food supply must also be considered. It is not enough to know *what kinds* of food the body needs and *how much* of each kind is necessary. We must also know whether or not the family for whom the plan is made *can afford* to buy the foods. This makes it quite important to understand food values, for then, when we plan meals which we find are too high in price, we know how to substitute

II. The cost of food is a necessary consideration.

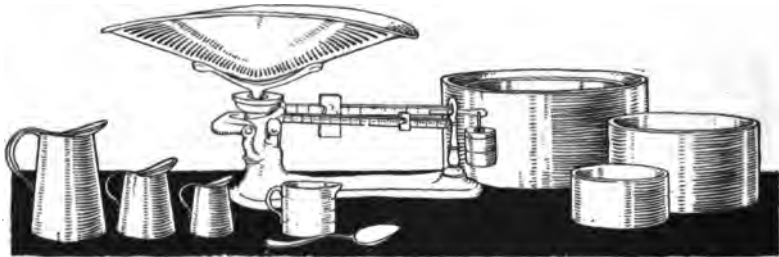


FIG. 189. — The girls weighed and measured food in their arithmetic class. A part of Miss Smith's equipment.

cheaper foods which will give the body practically the same returns.

And so the class planned to visit the market and get the prices of all kinds of foods. Committees were appointed to bring in various kinds of information. One group was to be responsible for fruits, another for vegetables, another for dairy products, and another for meats. The groups were asked to bring in the cost of given weights and measures or amounts so that the class would have sufficient data to find the

cost of 100-calorie portions, or of the full day's food supply.

Miss Smith's room was equipped with all kinds of weights and measures and she had also several books which gave information in regard to food values, 100-calorie portions, and energy requirements (Fig. 189). Her arithmetic classes were most interesting. The girls said that they never knew that fractions and decimals and percentage could be so interesting as Miss Smith made them.

Do you sometimes have lessons like this?

These are some of the problems that the girls worked. In time they became able to estimate the amounts of various foods needed to give the required number of calories per day and to find the cost of 100-calorie portions and of entire meals.

PROBLEMS

A quart of milk gives 675 calories; a pound of lamb chops, 1600; a pound of eggs (eight or nine, according to size), 670 calories. With milk at 17 cents a quart, lamb chops at 48 cents a pound, and eggs at 60 cents a dozen, which food is the cheapest per 100-calorie portion?

Cream of wheat has a fuel value of about 1600 calories and costs 15 cents a pound. Compare the cost of a 100-calorie portion of cereal with that of chops, milk, or eggs.

Large oranges cost 60 cents a dozen. What is the cost of a standard portion?

A good juicy apple yields about 100 calories. Dried apples give about 1320 calories per pound. Find the difference in cost

of 100-calorie portions, if fresh apples sell at the rate of 3 for 10 cents and dried apples cost 15 cents a pound.

SUGGESTIONS FOR STUDY AND REVIEW

1. What do you understand by the term "calorie"?
2. What is meant by a 100-calorie portion?
3. Look at the list of 100-calorie portions and choose suitable foods that will give enough for your needs for one day.
4. Try to plan the three meals of a day, using the foods which you have selected.

LESSON 28

CHOOSING AND BUYING FOOD

A trip to the market.

What foods shall we buy and how much do they cost?

Miss Ashley and the class concluded that the best way to learn about the prices and quality of foods was to go to the market where they could get first-hand information. They planned their trip in advance and knew just what information they wanted. The management asked Mr. Rogers, one of the men who knew the market well, to conduct the class and to answer any questions that the girls might ask.

In choosing the market to which to take the class Miss Ashley decided upon the place where she bought her own supplies. She patronized this market because it was especially clean and sanitary and because the salesmen were courteous and intelligent in regard to their goods (Fig. 190). She said that if all women would insist upon clean

I. Where shall we buy our food?

markets, grocery stores, bakeries, and meat shops it would not take long to bring about more sanitary conditions in many of them. The meat markets and grocery stores in Commonwealth City are much more sanitary since the Women's Club of the city became interested in bringing them up to the standards set by the Board of Health.

1. Pat-
ronize the
clean,
sanitary
store.



FIG. 190. — Miss Ashley bought her food supplies at a sanitary market.

Food is kept covered, refrigerators are kept clean, windows and doors are properly screened, and the shops in general are very much improved. Are there any food stores in your city that are not clean and sanitary? Can you do anything to improve conditions?

Perhaps the reason why the women were so interested in clean markets was that nearly all of the housewives in Commonwealth City did their own marketing.

They found that they got better satisfaction by going to market than by using the telephone. When the

II. Some suggestions for buying.

1. Personal attention in buying food.

2. Do not depend too much upon telephoning orders.

think of

3. Keep a list of articles needed.

4. Watch the salesman weigh and measure.

girls reached the market ever so many women were already there buying their supplies. Miss Ashley told the girls that she rarely telephoned a grocery or meat order unless she knew precisely the brand or quality in stock. She said that the telephone was sometimes a temptation to give short weight or measure. A personal visit to the market gives one a chance to compare qualities, to see materials weighed and measured, and it helps one to think of a greater variety in planning meals.

It is not necessary to go to market every day. Two or three trips a week should be enough. One should make a list of things needed and try to save time and effort by purchasing all the necessary articles at one time and in one place, or in the same neighborhood if possible.

Many women will make several trips or several telephone calls when a little thought could have reduced them to but one.

The personal visit to the market gives one the opportunity to know whether the amount bought is actually wrapped and delivered. One should look at the scales while groceries and meat are being weighed and should not hesitate to call attention to short weight (Fig. 191). Do not let the tradesman weigh the wooden butter dish or the



- **Would you like to go marketing in Brittany ?**

heavy brown paper when he weighs your pound of butter or meat. Sometimes the grocer has flour, sugar, rice, and other articles put up in packages of supposed certain weight. It is well to ask him to weigh them for you so you can be sure that you are getting the full amount.

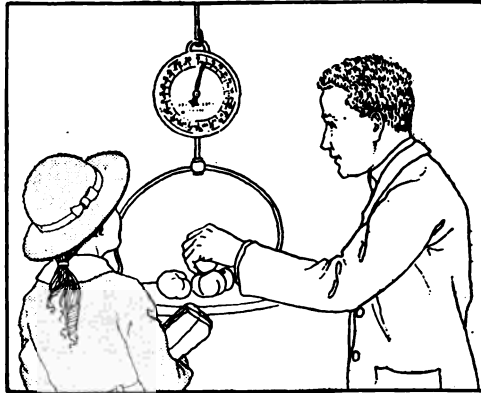


FIG. 191. — Watch the salesman weigh and measure.

It is well too, occasionally, to weigh the contents

of packages put up by manufacturers to see how they compare in price with the same amount bought in bulk. Food sold in package form is usually higher in price than that bought in bulk. We must decide when we buy bacon in jars whether we really want to pay for a glass for which we may have no particular use, and when we buy figs in fancy baskets whether we want to pay for figs or for baskets. Extra glass, tin, paper, and baskets must be paid for.

5. Package goods usually cost more than goods bought in bulk.

Since the war we are all trying to practice greater economy than ever before and it is only by being careful in little things that we shall be able to save what we should. It is saving the penny here and the

penny there that makes a savings account possible. It may not make much difference to us at the time,

whether we pay nine cents or ten cents for an article — the one cent seems a small amount — but when we think that we have lost or saved ten per cent of the price of the article it does make a difference. In buying food, especially, one

6. Practice little economies.

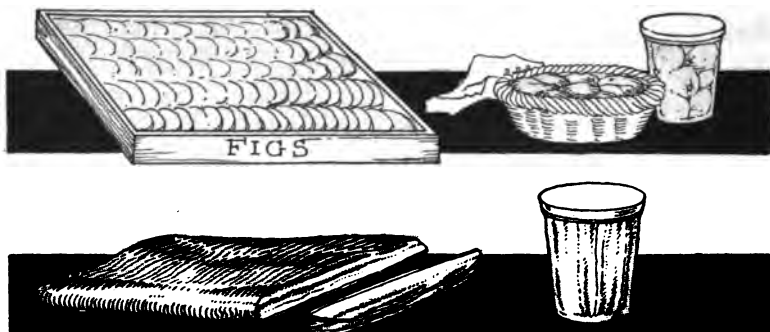


FIG. 192. — Package goods cost more than goods bought in bulk. Do you want to spend your money for baskets and glasses or for figs and bacon?

should watch the pennies, for there are so many items purchased that a little saved on each of them makes a considerable difference at the end of the year.

It is never wise when buying to ask for ten cents' or twenty-five cents' worth of anything; one should ask for a given weight or measure or number and inquire the price of the quality of goods desired.

It is more economical if one has a good place to store supplies to buy in reasonably large quantity. There is always a higher per cent of waste in buying in small

quantity. Of course foods that spoil easily should not be bought in a quantity larger than may be used while still fresh, but staple groceries or non-perishable foods may be purchased in larger amounts and stored.

7. Amounts to buy.

Some foods which should be purchased as needed are milk, cream, fresh fish, all shellfish, uncooked meat, delicate fruits, and vegetables that wilt easily. Some that will keep longer are butter, eggs, salt meats, apples, bananas, oranges, lemons, potatoes, and root vegetables. Groceries that may be kept on the shelves for a much longer time are flour, cereals, sugar, salt, coffee, tea, cocoa, chocolate, canned goods, spices, and flavorings. You have already learned how to care for most of them.

Another way to economize in the buying of food is to know in just what way the purchase is to be used so that the right quality as well as quantity may be chosen. Coarse celery stalks may be used for soup and cost less than the tender, white stalks which are more desirable for use as a relish; tough meat, which is less expensive than tender, may be purchased and used to advantage in certain dishes. One must not think that cheap foods are necessarily economical; cheap oranges, for example, may not be juicy; cheap bacon may be so strong in flavor that no one cares to eat it. It is not economical to spend money for anything that will not be used. On the other hand, high prices do not

8. Learn to make wise selections.

always insure good quality. For example, strawberries for which one pays fifty cents a box in February in a northern market are not as delicious as are the berries in June sold for fifteen cents a box. Fruits and vegetables bought out of season usually command a high price and one must know whether or not some less expensive food will answer the purpose as well. Generally speaking, it is more economical to use food in season although we are all growing more and more accustomed to seeing and buying fresh vegetables of all kinds the year round.

9. Seasonable foods are usually cheapest.

Mabel White, to whom the city market was a novelty, expressed great surprise at seeing so many fresh vegetables during the winter and wondered how it was possible. On the farm, she said, they could tell the season of the year by the food on the table. By careful planning some new fruit or vegetable was possible every few weeks from early spring to late fall, but in the city it seemed possible to have nearly anything at any time provided one had the money with which to buy.

All of the girls were interested when Mr. Rogers told them where the various foods in stock came from and how they were transported. There were on the market on this particular day in early March green beans from Florida; wax beans and eggplant from South Carolina; beets, beet tops, and onions from Bermuda; water cress from Maryland; spinach from Texas;

tomatoes from Florida; cauliflower from California, potatoes from Maine; turnips from Canada; oranges from California; pineapples from Hawaii; and various other products from different states and countries, all in such fresh condition that one would never guess that they had traveled such long distances. Mr. Rogers explained that it was possible to ship nearly any kind of food material to any place by means of the refrigerator cars now used. Of course there is a great deal of labor and expense attached to shipping and storing foods, which those who buy must help to share. But it is a great satisfaction to millions of people to be able to vary the diet by the addition of something fresh during the winter months. Refrigerator cars and cold storage plants have made it possible for the great numbers of people living in big cities to have as good food as is produced in the country.

As the class examined the fruits and vegetables Miss Ashley and Mr. Rogers called the girls' attention to many points in selecting them. The several committees made note and reported to the class at their next meeting. Some of the items were as follows:

10. Some specific suggestions in buying fruits and vegetables.

1. In buying oranges choose those that have skin of fine texture and are heavy for their size. The same is true of grapefruit. Remove the wrappers in order to know whether the fruit is sound.

2. Ask the salesman to pour out the contents of

berry boxes so that the entire box may be examined. One bad berry may spoil the whole box in a short time.

3. Buy one large pineapple rather than two small ones for there will not be so much waste.

4. It is cheaper to buy large-sized prunes than small for there will not be so many pits.

5. Examine all dried fruit to see whether it is in good condition.

6. Select fresh, crisp salad vegetables.

7. Examine leaf lettuce for little green bugs.

8. Tomatoes with blemishes are poor purchases.

9. Do not buy wilted or badly shaped cucumbers.

10. A firm, heavy head of cabbage is more satisfactory than a light, loose head.

11. The best heads of cauliflower are well bleached, heavy, and compact.

12. Fresh beans will snap when broken.

After the class had examined and studied fruits and vegetables, Mr. Rogers took them to the cold storage

rooms where the meat was kept. The temperature was down to 34° F. and the girls were glad that they had on their wraps.

There on the hooks hung quarters of beef and carcasses of pork and veal and lamb. Mr. Snyder, the

butcher, showed the girls different cuts of meat and told them how to distinguish one from the other. He took a hind quarter of beef (Fig. 193) and cut it up into five large pieces, —

11. Some suggestions for buying meat.

a. Study the cuts of meat.

the loin, rump, round, flank, and shank. Later he cut these into smaller pieces to suit his customers.



FIG. 193. — A corner of the cold storage room. *A*, fore quarter of beef. *B*, hind quarter of beef.

(Study the accompanying diagrams and pictures.) The most tender meat, he explained, is found in the loin. This Mr. Snyder cut up into steaks from one and one half to two inches thick for he knew what his customers wanted. Look at the shape of the bone. These steaks are sometimes called T-bone steaks; they are also called porterhouse and Delmonico steaks (Fig. 194).



FIG. 194. — Porterhouse steak.

The rump (Fig. 195) is used for steaks, braising, and pot roasts, and for corning. The round (Fig. 196) is a well-flavored, juicy cut used for steaks and pot roasts.



FIG. 195. — The rump consists of about one third fat and one half lean meat.

It is not very fat. As Mr. Snyder put the round on the block the “inside” of the leg was uppermost. This upper muscle is sometimes spoken of as the “top” round or “inner” round and is more tender than the “bottom” or “outer” round.

The flank is a boneless cut containing a muscle which is frequently sold as flank steak (Fig. 197). Notice how the muscle fibers run. This steak must be “scored” or pounded to make it tender.

The shank is good for soups; stews and hamburger steak may be made from some parts of it.



FIG. 196. — The round consists of about two thirds lean meat and one sixth bone.

The fore quarter when hanging in the market looks as in Fig. 193. Can you tell the difference between the fore quarter and the hind

quarter as you see them hanging? Mr. Snyder cut the fore quarter into several large pieces, — the ribs, clod, chuck, neck, brisket, and shank. The rib cut is used for roasts. There are seven ribs in this cut; the two that lie nearest the loin are the best, but all are good.



FIG. 197. — Flank steak. Notice the way the muscle fibers run.

The clod or shoulder is used for steaks or pot roasts. Sometimes shoulder steaks are sold for sirloin. Ask your butcher to show you the difference between a shoulder steak and a sirloin steak. The brisket and the plate (Fig. 198) are used for soups, stews, pot roasts, or for corning. The neck is good for mincemeat and stews.



FIG. 198. — The brisket gives a streak of lean and a streak of fat.

In buying meat one should know just what use is to be made of the cut. *b. How to tell good beef.*

Tender meat should be used for broiling or roasting, while the less tender pieces may be used for braising, stewing, chopped meat, or stews. Tender beef is firm, fine grained, well marbled with fat, lacking in connective tissue, and bright red in color. Tough meat is coarse grained and shows considerable connective

tissue. The coarse-fibered meat is usually juicy and well flavored and may be made delicious and tender by the proper method of cooking.

c. Ask for all trimmings.

When buying meat the purchaser should ask for all the bones and fat that were weighed before the cut was trimmed. They will be good for the soup kettle.

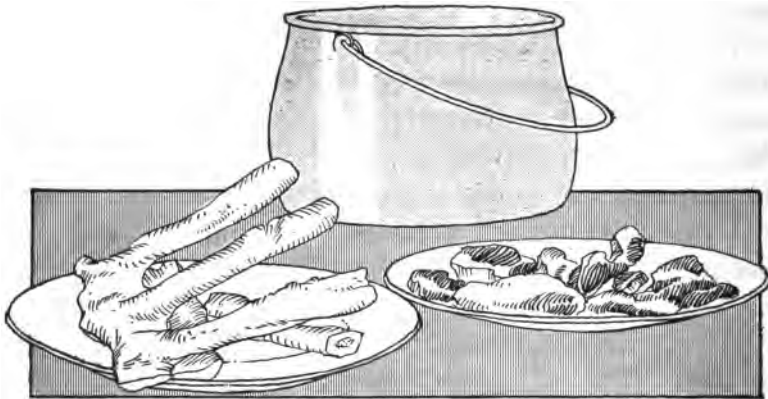
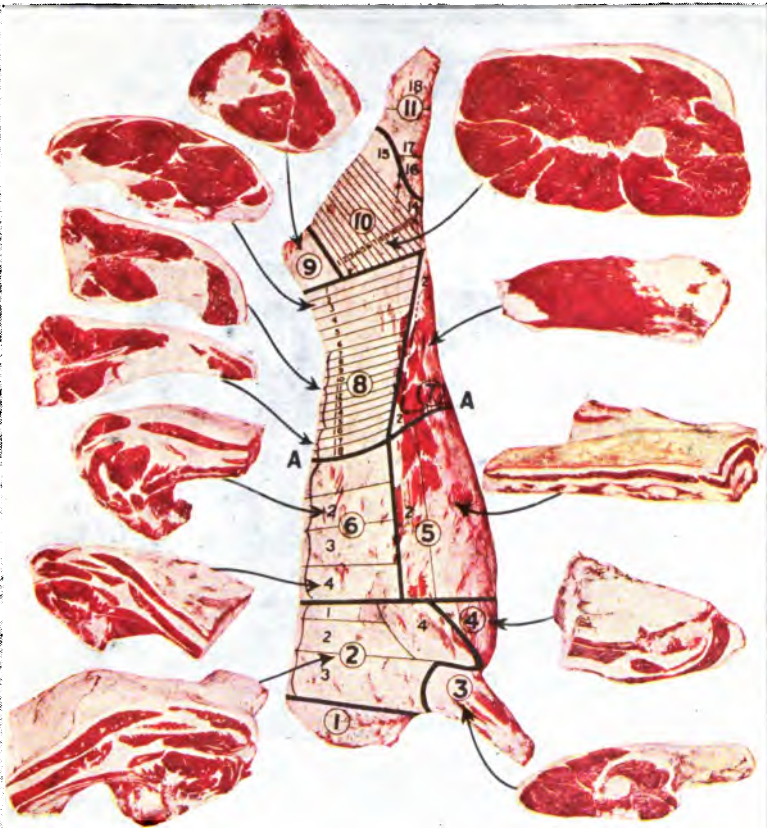


FIG. 199. — Ask the butcher for the bones and fat that were weighed before the cut was trimmed.

It took Mr. Snyder such a short time to cut up the beef that the girls remained to watch him cut up a side of pork and a carcass of lamb and veal. He never made a false stroke, and with the help of two men to place the carcass and remove the cuts he was able to cut up a great deal of meat in a short time. Miss Ashley told the girls the names of the cuts and suggested how they might be used. (See the accompanying charts.)

d. Cuts of veal, lamb, and pork.



Beef Cuts

FORE QUARTER

- | | |
|---------------|-----------|
| 1 NECK | 4 BRISKET |
| 2 WHOLE CHUCK | 5 PLATE |
| 3 FORE SHANK | 6 RIB |
- 1 5th rib roast
2 Chuck steaks
3 Pot roast
4 Clod
- 1 11th and 12th rib roast
2 9th and 10th rib roast
3 7th and 8th rib roast
4 6th rib roast

A-A—Portion above this line is the hind quarter, while that below is the fore quarter.

HIND QUARTER

- | | |
|---------|---------------|
| 7 FLANK | 9 RUMP |
| 8 LOIN | 10 ROUND |
| | 11 HIND SHANK |
- 1 Flank steak
2 Bone
3 Round beef
4 1st round steak
5 2nd round steak
6 3rd round steak
7 4th round steak
8 5th round steak
9 6th round steak
10 7th round steak
11 8th round steak
12 9th round steak
13 10th round steak
14 11th round steak
15 12th round steak
16 13th round steak
17 14th round steak
18 15th round steak

Courtesy of Wilson and Co.

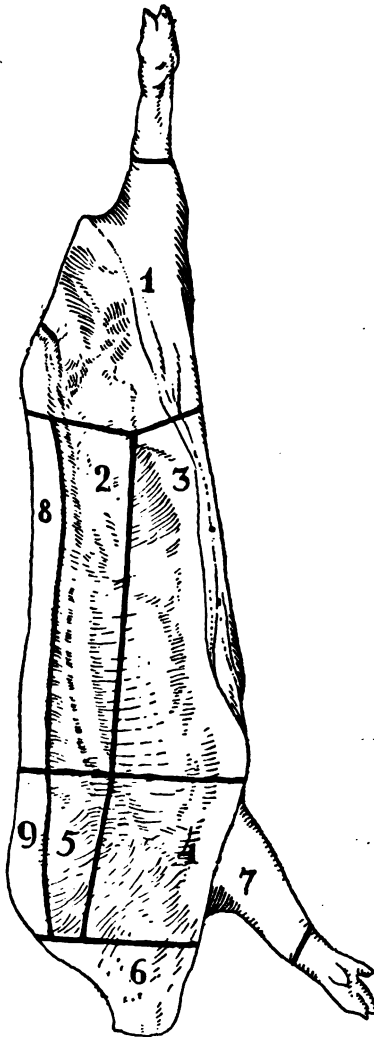


FIG. 200. — Cuts of pork.

She also called attention to the appearance of the flesh and fat so that the girls would recognize good meat when buying.

The flesh of veal is pink and fine grained, showing very little fat. Lamb is pinkish red, fine grained, too, but with hard, white fat. The flesh of pork is pale, pink, firm, and fine grained and has considerable white fat which is not so hard as the fat of beef or lamb but which should not be too soft.

c. Appearance of good veal, lamb, and pork.

Mr. Rogers told the girls that there was so

1. Ham — For baking, frying, broiling.
2. Loin — Roasts and chops.
3. Belly — Used for bacon.
4. Picnic Butt or Shoulder — Roasts, steaks, chops.
5. Boston Butt — Steaks and roasts.
6. Jowl — Cheap bacon.
7. Hock — Stewed and pickled.
8. Fat back — Smoked or pickled.
9. Clearplate — Smoked or pickled.

much of interest to know about meats that if the class came every day for a few weeks they could not learn it all. He urged the girls to learn how to cook meat properly. A good cook, he said, can make the cheapest cuts palatable and attractive while a poor cook can spoil the most expensive cut. The price of meat has little to do with its food value. The edible portions of the cheaper cuts, if not so tender and attractive in appearance, are quite as nutritious as the edible parts of the more expensive ones. If every housewife would learn to buy wisely and prepare carefully the meat which her family uses, she could reduce her meat bill considerably.

Since meat is so commonly

f. Learn to buy wisely and prepare carefully.

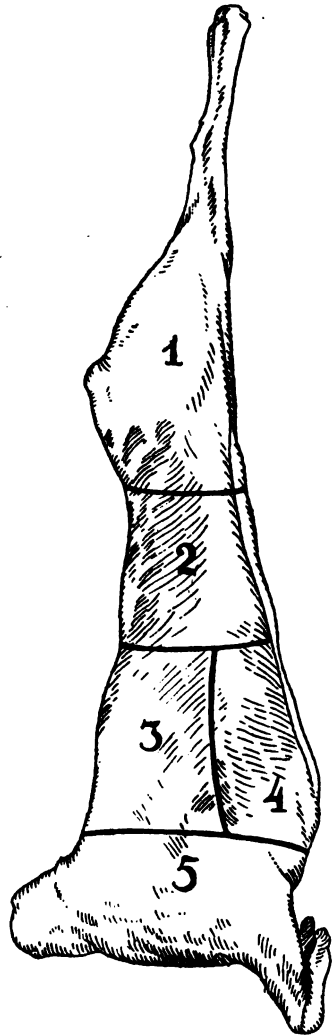


FIG. 201. — Cuts of lamb.

1. Leg — Roasts.
2. Loin — Roasts and chops.
3. Back — Roasts and chops.
4. Breast — Roasts and stews.
5. Chuck — Roasts and stews.

used for dinner and is such a high-priced food someone suggested that it might be interesting to see what the Sunnysiders could learn at school to reduce the meat bills at home.

When the girls went to their arithmetic class the next day they had the information necessary to find the cost of 100-calorie portions of many of the commonly used foods. They weighed and measured and later computed the cost of 100-calorie portions and of entire meals.

Miss Ashley sent Miss Smith the following table which she thought might be of value :

TABLE SHOWING 100-CALORIE PORTIONS OF RAW EDIBLE MEAT¹

MEAT	LEAN	MEDIUM FAT
	Weight, Ounces	Weight, Ounces
Beef, round	2.3	1.7
Chicken (fowl)	3.2	1.6
Lamb, leg	2.8	1.6
Mutton, leg	1.9	1.5
Pork, loin chops	1.4	1.0
Veal, leg	2.9	2.2

SUGGESTIONS FOR STUDY AND REVIEW

1. Describe the market at which you would like to buy food.
2. Why is it more satisfactory to market in person than by telephone ?

¹ From Kinne and Cooley, "Foods and Household Management."

3. Suggest several ways of practicing economy in buying food.
4. Make a list of food materials that it is well to keep on hand. How much of each would you buy at any one time?
5. Go to a meat shop and find the cost of the different cuts of meat. How much meat does your family use each month?
6. What difference in appearance is there between tender and tough beef?
7. How do you tell the difference between pork, lamb, and veal?
8. Can you find the cost of a 100-calorie portion of the meats suggested in the table?

LESSON 29

THE PREPARATION OF MEAT DISHES

How can we reduce the meat bill?

The Sunnysiders learn to do it by using some of the less expensive cuts and by cooking the more expensive cuts properly.

If we should take a look at the millions of dinner tables all over our country what do you suppose the main dish would probably be? Meat, no doubt.

We are told that in the United States about one third of all the money spent for food materials is

I. How much money does your family spend for meat? spent for meat, and that each person uses on the average 185 to 190 pounds each year. That means that the meat bills in many families must be very high. On this basis how many pounds of meat does your family use? Have you any idea how large your meat bill is each month?

The meat bill of the United States is estimated to be over \$2,300,000,000 each year. Just think what a

large amount of meat that represents! Americans are great meat eaters. They use more than any of the European nations. America also produces more meat than any other country. It is said that the slaughtering and meat-packing industry is the largest industry in the United States.

Is it necessary for us to eat so much meat? Scientists tell us that too much meat is not good for us, especially if we live indoors and do not exercise much. When a great deal of meat is eaten intestinal trouble may result and, too, harmful acids may be formed in the body. As a usual thing those who eat large amounts of meat do not eat enough fruits and vegetables, and consequently do not get as much of the valuable mineral materials as they should. No one needs meat three times a day, nor even twice. Meat once a day is enough even for a hard-working man, and others are just as well off if they use it only occasionally. Other dishes may be served in place of meat, — these we shall learn about later.

“If meat is not necessary, why is so much eaten?” questioned Margaret. We have got into the habit of eating meat because it has such a pleasant flavor, because it is so easily cooked and digested, and because people have a satisfied feeling after a meat meal. Meat is a good food and may be used, but it need not be used in such large amounts as the American people have been using it. It is a very valuable source of protein, fat, and mineral

II. Do we need to eat so much meat?






III. What foodstuffs does meat contain?

matter. You know the value of each of these in the body. Notice the chart showing the composition of meat. Which foodstuff is lacking? (See Fig. 202.)

Miss Ashley told the girls that the families which spend one third of the food allowance for meat either eat too much or purchase too expensive cuts. She said that it would not be difficult to cut down the amount to one sixth and that by so doing some money could be saved and the health of the family improved.

What are some ways of reducing the meat bill? During the war when we had to save meat to send to our soldiers and our Allies, and when we wanted to save money for

FIG. 202.—One of Miss Ashley's meat charts: *A*, lamb chop; *B*, pork chop; *C*, ham; *D*, porterhouse steak; *E*, dried beef. Composition based on edible portion.

A		WATER 53.1 PROTEIN 17.6 FAT 28.3 ASH 1.0
FUEL VALUE PER POUND 4540 C.		
B.		WATER 52.0 PROTEIN 16.9 FAT 30.1 ASH 1.0
FUEL VALUE PER POUND 4580 C.		
C.		WATER 40.3 PROTEIN 16.1 FAT 38.8 ASH 4.8
FUEL VALUE PER POUND 4940 C.		
D.		WATER 61.9 PROTEIN 18.6 FAT 18.5 ASH 1.0
FUEL VALUE PER POUND 4150 C.		
E.		WATER 54.3 PROTEIN 30.0 FAT 6.6 ASH 9.4
FUEL VALUE PER POUND 640 C.		

War Savings Stamps, we found many ways of saving on meat.

If we think we must have meat yet want to make the bill smaller we can buy the tougher cuts and cook them well. Tender meat is expensive because there is so little of it on the animal and the demand for it is great. Furthermore we can make a little meat go a long way by adding it to dishes

1. Buy less expensive cuts.

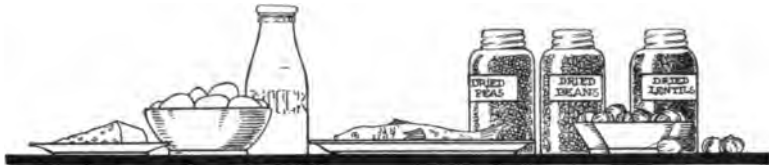


FIG. 203. — Foods that may take the place of meat.

containing other things. The pleasant meat flavor in gravies, soups, stews, and other dishes is sometimes quite as satisfying as the meat itself, and but little meat is required to produce it. For most families probably the most difficult method of reducing the bill is to substitute some protein food for meat. There are many foods that may take the place of meat as far as the needs of the body are concerned but they do not give the desirable flavor. Milk, cheese, fish, egg, dried beans, peas, lentils, and nuts are all good sources of protein material and may be used in place of meat (Fig. 203).

2. Use small amounts of meat to flavor other foods.

3. Other foods may take the place of meat.

Whether we buy tough meat or tender, or use much

or little, we should know how to cook it well. We should be able to tell by looking at a piece of meat how it should be cooked. Meat which is fine in texture, well mottled with fat, and contains little bone does not require long cooking to make it tender; it may be broiled or roasted. Meat which is coarse-grained,

showing that it has thick muscle walls and considerable connective tissue, should be given long, slow cooking in water or steam.

Meat that is very coarse and full of connective tissue and bone makes good soup. Miss Ashley showed the girls three different cuts of meat,—a lamb chop, a piece of lower round, and a piece of the shank. It was not difficult to see the difference in quality of fiber and amount of connective tissue and bone.

Miss Ashley thought that the girls would understand more about the reasons for using different methods of cooking the various cuts if they knew something about the structure of muscle tissue so they performed some experiments which you may like to try.

Experiment 1. Take a small piece of meat and with a knife or spoon scrape it until you have a mass of red scrapings. You will have also some white, tough material. Make two little balls of the scrapings and cook one in boiling water and the other in water just under the boiling point. Notice the difference.

V. How shall we cook our meat?

1. Study the texture and physical structure of meat.

2. Some class experiments.

The red scrapings which come out of the meat are tiny tubes held together in bundles by a tough, white material called connective tissue. The more a muscle is exercised and the older it is the more connective tissue there will be. That is the reason why the muscles of the legs and shoulders of the animal are tougher than the muscles of the back. This connective tissue softens when

3. Cooking
the less
tender
meat.

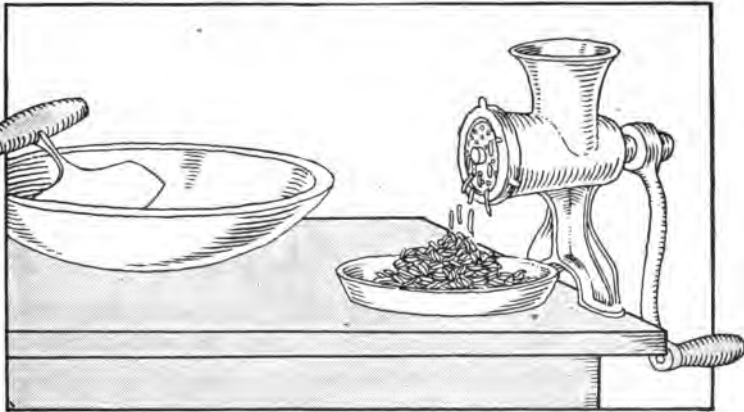


FIG. 204. — Less tender cuts of meat may be ground or chopped.

cooked for a long time. Long cooking without supplying water would make the meat hard and dry, so we have found that one way to make tough meat tender and juicy is to cook it in water for a long time.

The scrapings that were cooked in the boiling water were much harder than those which stood in water just below the boiling point so the class decided that in order not to make the meat hard the temperature for

cooking tough meats should be just below the boiling point.

That is what we do when we cook stews, pot roasts, or braised meat. In the stew the meat is cut into small pieces; in the pot roast it is left in one large piece.

Someone suggested that another way to cook meat that is not very tender is to chop it or grind it and make it into balls or a loaf. The chopping or grinding does what our teeth would find it hard to do (Fig. 204).

The girls used some of these recipes at school and at home.

BEEF STEW WITH DUMPLINGS

1 pound beef	6 small carrots
1 quart water	6 small turnips
1 pint tomatoes	$\frac{1}{2}$ cup celery
3 potatoes	1 teaspoonful salt
6 small onions	$\frac{1}{2}$ teaspoonful pepper

Wipe the meat, cut into small pieces. Try out some of the fat and brown the meat and onions in it. Add the water, tomatoes, and salt and pepper and simmer until the meat is tender. Add the carrots and turnips and cook a half hour, then add the potatoes and cook until done.

DUMPLINGS

2 cups flour	2 teaspoonfuls butter
4 teaspoonfuls baking powder	1 cup milk
$\frac{1}{2}$ teaspoonful salt	

Mix and sift the dry ingredients; work in the butter, add the liquid gradually until the mixture can be dropped from a spoon. Drop by spoonfuls into the stew and cook from fifteen to twenty minutes *without* lifting the cover. Arrange attractively on a large platter.

MOCK DUCK OR STUFFED FLANK

Buy a thick flank steak. Wipe with a damp cloth. Make a pocket in the steak by slitting it at the side lengthwise and fill it with the following dressing.

DRESSING

2 cups bread crumbs moistened with water	$\frac{1}{2}$ teaspoonful pepper
1 teaspoonful salt	1 tablespoonful chopped onion
	2 tablespoonfuls drippings

Pack the dressing into the pocket and pat it into shape. Skewer or sew together. Bake in a covered roaster for an hour and a quarter. A few slices of bacon placed on top about ten minutes before removing from the oven improves the flavor.

Round steak may be used in the same way.

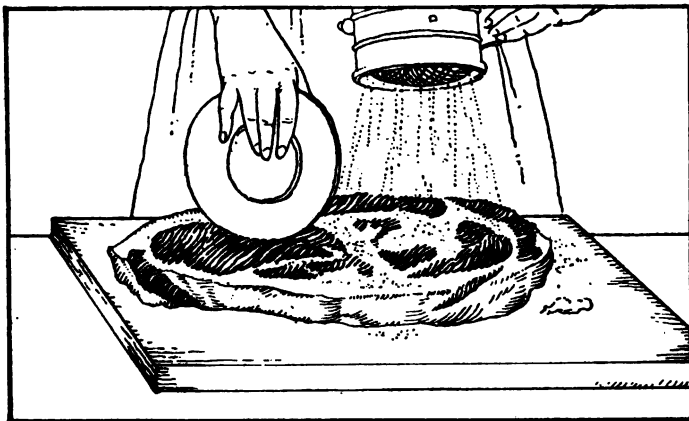


FIG. 205. — Beating flour into round steak to make a Swiss roast.

SWISS ROAST

Buy a round steak cut $1\frac{1}{2}$ to 2 inches thick. Wipe clean with a damp cloth. Place on a board and beat flour into the meat with

What caused the water in the dish to become red? Why is the water in the saucepan not red?

It is easy to see that the heat prevented the meat juices from escaping. The meat albumin on the outside of the piece was hardened and the ends of the tiny tubes were sealed, keeping the juices where they belonged. What would happen should the second piece be boiled for ten or fifteen minutes?

Experiment 3. Put two small pieces of steak on a smoking hot griddle. Turn one every few seconds; leave the other unturned. What happens?

Why has the juice come to the surface of the unturned piece? What have you studied in your science class that will help you to answer this? Why is the other piece thicker than it was when put on the griddle?

From the results of this experiment can you suggest a good way to broil a steak or a chop?

The same principle applies to the cooking of tender roasts. The ends of the cut fibers may be sealed by searing the surface on a hot griddle or in a very hot oven, or by dredging the surface with flour. After the outside is cooked the meat may be cooked at a lower temperature to keep it from getting hard and dry.

BROILED STEAK OR CHOPS

Wipe the meat with a damp cloth and trim off the outer skin. If a wood or a coal fire is used, have a bed of glowing coals; if gas is used, have a broiler heated. Grease the broiler. Place the meat on the broiler and sear one side and then the other. Turn

the broiler or the meat every few minutes until the meat is brown and done according to taste. In turning the meat do not pierce with a fork. Season with butter, pepper, and salt. Serve on a very hot platter.

PAN-BROILED STEAK

For pan broiling use a cast iron pan. Brush the pan with a little of the meat fat. When it is smoking hot put in the steak, sear on one side, turn, sear on the other, and proceed as above.

What cuts of beef would you choose for broiling? Are you sure that you can recognize porterhouse, sirloin, and round steaks?

What cuts would you choose for an oven roast?

ROAST OF BEEF

Wipe the roast with a damp cloth. Sprinkle with salt and dredge with flour, or sear all the surfaces in a hot pan and then dredge with flour. Place in a roasting pan and put into a very hot oven for ten or fifteen minutes, reducing the heat during the rest of the cooking. Baste the roast often with the fat that tries out during the cooking. A little water may be poured into the bottom of the pan if necessary. Allow from fifteen to twenty minutes for each pound of beef.

Roasts of other kinds of meat are cooked in the same way. Veal and pork should always be cooked until well done. Beef and mutton may be served rare.

You learned in the last lesson that cuts of meat containing bone, tendons, cartilage, and coarse-fibered muscle are sold for the making of soup.

5. Making soup stock. There are substances in bone, tendons, and cartilage which are dissolved out by long cooking in

water. The coarse muscle fibers contain what is found in all muscle tissue with possibly a larger amount of the extractives, which give meat its characteristic flavor. Knowing what you do about cooking meat, how would you cook soup bone and meat to draw out into the soup all the possible food value and flavor?

If fresh meat and bone are purchased, it is a good idea to have the butcher saw through the bone several

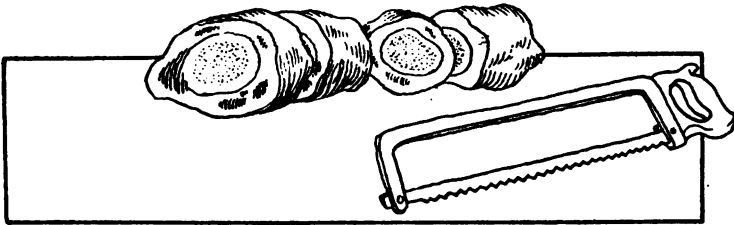


FIG. 206. — Have the butcher cut the soup bone into several small pieces.

times to expose more cut surface to the water (Fig. 206). The meat should be cut up into small pieces. All trimmings of meat cut from roasts or steaks, pieces of skin, and bits of fat may be put into the soup kettle. Mutton fat should not be used because it gives a strong flavor. Pork is not used for soups since the flesh of pork does not contain extractives to give flavor.

SOUP STOCK

2 pounds meat, bone, and fat	2 cloves
$\frac{1}{4}$ teaspoonful celery seed	2 quarts cold water
5 peppercorns	$\frac{1}{2}$ bay leaf
$2\frac{1}{2}$ teaspoonfuls salt	

Cut the meat and fat into small pieces; have the bone sawed

into pieces. Try out some of the fat and brown about one third of the meat in it. Put all the meat into a kettle, add the seasoning and water; cover and allow to soak for one hour. Then cook below the boiling temperature for three hours; strain through a coarse strainer. Set aside to cool. If the fat has been allowed to solidify, skim from the surface when the stock is to be used.

1 can of tomatoes, 1 carrot, 1 turnip, and 1 onion (all cut in small pieces) may be added to the stock. Trimmings and bones of fresh meats or bones and pieces of roasts or unused meats may be cut into small pieces and used for soup stock. No smoked or charred pieces of meat or bone should be used, however. Stock may be colored with caramel, provided the sugar has been cooked sufficiently to lose its sweetness.

What should be done with the soup meat? It should be used in some way. It may not have much flavor but it is still a valuable food. If it is well seasoned, soup meat may be used in making croquettes, hash, and other savory dishes. Soup as ordinarily made gets its greatest nutritive value from the vegetables added to the stock; the broth itself contains very little nourishment.

Other good meat dishes may be made from some of the internal organs of animals. The heart, liver, kidney, and sweetbreads are commonly used and may be made very palatable by proper cooking.

6. Food
value of
soup and
soup meat.

VI. Some
other
meat
dishes.

BAKED CALF'S HEART

Remove all the large blood vessels and the clotted blood; wash the heart and allow it to soak in cold water one hour or longer.

Rinse, wipe dry, and fill with stuffing. Dredge with flour and brown in hot fat. Place in a casserole with a cup of tomato juice and cook slowly for two hours. Baste frequently.

STUFFING

1 cup fine bread crumbs	1 teaspoonful minced onion
2 tablespoonfuls melted butter	Salt and pepper to taste

LIVER AND BACON

Cut the liver into one half inch slices. Pour boiling water over the slices and allow to stand five minutes. Remove all tough tissue. Dredge with flour, season with salt and pepper, and sauté in bacon fat until brown on both sides.

Liver should not be served rare, and neither should it be cooked until hard and dry. Serve with crisp bacon.

TO COOK BACON

Use thin slices of bacon from which the rind has been cut. Put into a pan and cook slowly, turning as necessary. The fat should not be allowed to smoke and burn.

Bacon may be broiled by placing it on a broiler under the gas flame, or it may be cooked in the oven.

All bacon fat should be strained and saved for cooking purposes. When the bacon has been properly cooked the cold fat is almost white.

The heart is a dense, tough muscle and requires long, slow cooking. It is usually stuffed and baked. The liver and kidneys should be carefully prepared; all pipes and skin should be removed. It is well to pour hot water over slices of liver and allow them to remain in it for five or ten minutes before sautéing.

Kidneys should be soaked in cold water for a half hour and then be parboiled. They are more tender when cooked for only ten or fifteen minutes, or a long cooking for about two hours at a low temperature will produce good results; halfway measures make them hard.

SUGGESTIONS FOR STUDY AND REVIEW

1. Keep account of the amount and cost of the meat eaten by your family for one month. What cuts were purchased? How were they cooked?
2. In what way could your meat bill be reduced if necessary?
3. What are some of the possible ill effects of eating too much meat?
4. How can you tell whether meat is tender or tough?
5. How should a steak be broiled? Give all the reasons for using your method.
6. How would you cook a roast cut from the round of beef?
7. Explain how to make soup stock, giving reasons for your method.
8. In cooking pork and veal what especial care is necessary?

LESSON 30

OTHER MAIN DISHES FOR DINNER

What can we use in place of meat? This question is easy to answer, especially since the war, for during that time thousands of people learned that there are many protein-giving foods that satisfy the needs of the body when properly cooked and used with other foods. Milk, eggs, cheese, fish, beans, peas, lentils, and nuts may all be used in place of meat.

When Miss Ashley asked her class the above question the girls recalled the foods that they had studied and

at once suggested the use of milk and eggs. They recalled some of the war slogans such as "Do not buy a pound of meat until you have bought three quarts of milk." "Save Meat, Buy more Milk." These slogans are just as good to-day as they were during the period of the war. What combination milk and egg dish do you know how

I. The use of milk and eggs.

to prepare?

Another food that may be used in place of meat is cheese.

Cheese is one of the cheapest and best animal foods.

II. Cheese in place of meat.

American cheese, which is the kind ordinarily used in cooked dishes, contains about equal amounts of protein,

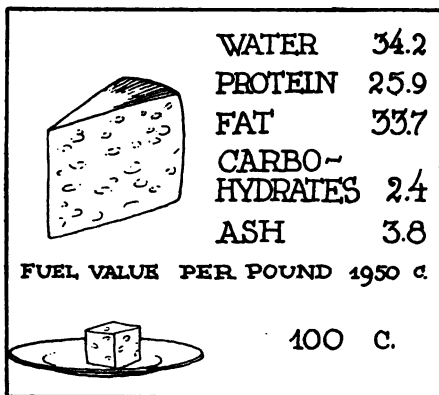


FIG. 207. — Cheese may be used in place of meat.

fat, and water, and is rich in calcium and phosphorus. A gallon of milk will make about a pound of cheese. How does a pound of cheese compare in fuel value and price with a pound of medium fat round steak? Compare the composition of cheese and meat. What makes the difference in fuel value? About how much cheese will make a 100-calorie portion (Fig. 207)? How much will a portion cost? How much meat is there in a 100-calorie portion?

1. The food value of cheese.

You will see that a small amount of cheese contains a comparatively large amount of food, and this

2. Cheese is a concentrated food. fact must be considered when it is used. If you were to use cheese in place of a portion of meat how much would you use?

Since cheese is a concentrated, dense food it should be either well chewed, broken up by grating, or softened by cooking, if it is to be easily digested.

3. Digestibility of cheese. Often it is eaten with rich desserts at the end of a heavy meal and is blamed for causing indigestion. The person rather than the cheese is at fault. When used in suitable ways, in combination with bread, potatoes, and other starchy foods, it is well digested. It is well to serve juicy fruits and vegetables in the same meal with cheese dishes. Can you give the reason for this?

In deciding how cheese should be cooked we must remember what it contains. What is the effect of

heat upon fat? What kind of temperature gives the best results in cooking eggs?

4. How shall cheese be cooked? Meats? At what temperature should cheese dishes be cooked? Miss Ashley let Mabel

White perform an experiment before the class. She first put some grated cheese into a small saucepan and cooked it over hot water; next she put some into a pan and cooked it over the gas flame. The girls were quite surprised at the results. Try this in your class and see what happens. See if you can determine what care must be taken in cooking cheese dishes to prevent

the cheese from becoming stringy or tough. In combining starchy foods like macaroni, rice, or potatoes with cheese what must we do in order to have the starch well cooked and to avoid cooking the cheese too much?

The following cheese dishes are all good. Which one would you like to make?

CHEESE SAUCE

2 tablespoonfuls butter	$\frac{1}{2}$ cup or more of grated cheese
2 tablespoonfuls flour	$\frac{1}{4}$ teaspoonful salt
1 cup milk	A few grains pepper or paprika

Melt the butter. Add the flour and seasonings and then the milk gradually. Cook until the mixture is well blended. Add the grated cheese and stir until it is melted. The amount of cheese may be varied to suit the taste. This sauce is used to pour over toast, boiled rice, boiled macaroni, crackers, hard-boiled eggs, or omelet.

CHEESE FONDUE

$1\frac{1}{2}$ cups hot milk	$\frac{1}{2}$ teaspoonful salt
$1\frac{1}{2}$ cups stale bread crumbs	4 eggs
1 tablespoonful butter	1 cup grated cheese

Mix the milk, bread crumbs, butter, salt, and cheese. Add the yolks, which have been thoroughly beaten. Then cut and fold the stiffly beaten whites into the mixture. Pour into a buttered baking dish and cook 30 minutes in a moderate oven. Cold boiled rice or other cooked cereal may be used in place of bread crumbs.

CHEESE SOUFFLÉ

2 tablespoonfuls butter	$\frac{1}{2}$ teaspoonful salt
3 tablespoonfuls flour	A few grains of cayenne
$\frac{1}{2}$ cup milk, scalded	$\frac{1}{4}$ cup grated cheese
3 eggs	

Melt the butter. Add the flour and seasonings and then gradually the scalded milk. Add the cheese. Cook until the cheese is melted. Remove from the fire and add the yolks of the eggs, well beaten. Cool the mixture, then cut and fold in the stiffly beaten whites. Pour into a buttered baking dish and bake 20 minutes in a slow oven. Serve at once.

CHEESE, CORN, AND POTATO SCALLOP

$1\frac{1}{2}$ cups cooked potatoes, diced
 $1\frac{1}{2}$ cups canned corn
 2 cups cheese sauce (see recipe given)

Arrange the potatoes and corn in a greased baking dish in alternate layers with cheese sauce. Cover the top with buttered crumbs and bake in a moderate oven for about 25 minutes. The potatoes may be used without the corn.

Ordinarily when speaking of cheese dishes we think of those in which we use the American cream cheese.

We need not limit our use of cheese to one kind, since the market affords many varieties. Cottage cheese at least should be used much more generally than it is. It may be purchased at the market or it may be made at home with little trouble (Fig. 208).

5. The value of cottage cheese.

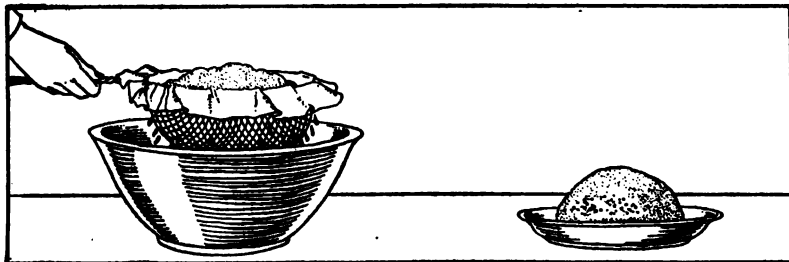


FIG. 208. — Cottage cheese is easily made and is a valuable food.

COTTAGE CHEESE

To make cottage cheese take thick, sour milk. Put the milk into a double boiler and heat slowly until the curd separates out from the whey. Do not allow it to become too hot, or the curd will become tough. The best temperature is from 90° F. to 95° F. When the curd is set, pour into a strainer lined with cheesecloth and let it drain. Remove the cheese from the cloth, crush with a fork, moisten with cream or melted butter, and add a little salt and other seasoning as desired.

What foodstuffs does cottage cheese contain? With what food should it be eaten? Can you suggest several ways of using it?

Fish has always been used in place of meat (Fig. 209). In general it has much the same composition and food value as meat and is as easily digested. In most localities it is cheaper than meat. Fish is always at its best when used just after it is caught (Fig. 210). However, great quantities are frozen and are kept for long periods of time.

III. The
use of
fish in
place of
meat.

Fish spoils very easily and needs to be cooked or put into storage at once. If you live near the sea coast

1. Selecting fish.

or near lakes or rivers where fish is caught, you should have no difficulty in getting fresh fish, but if you do not, you should be careful when buying to select fish with firm flesh, pinkish gills, and bright eyes; it should have no offensive odor. If the fish is frozen, it should be cooked immediately on

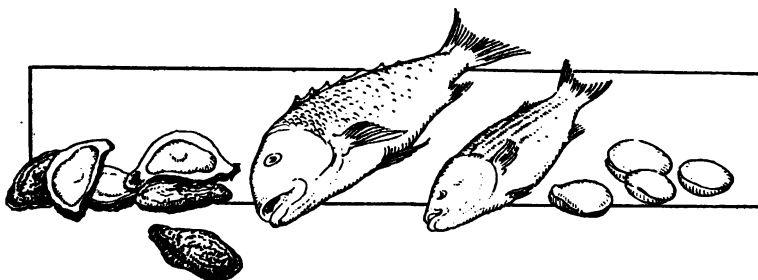


FIG. 209. — Fish may be used in place of meat.

thawing it out. Unless good fresh fish can be bought it is more satisfactory to use salt fish or the canned product.

In cooking fresh fish it is necessary to be careful. The flakes fall apart easily because the connective

2. How to cook fresh fish.

tissue which holds them together softens very easily. When fish is baked strips of cloth may be placed under it to prevent it from breaking when it is lifted; when it is boiled it may be wrapped in cheesecloth so that it will not break.

Fish may be cooked in a variety of ways, very much

the same as meat. It may be baked, broiled, fried, made into a stew called chowder, and into soup.

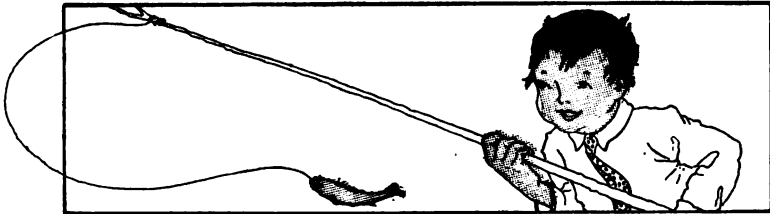


FIG. 210. — Fish is at its best when used just after it is caught.

BAKED FISH

[Clean well. Stuff the fish. Sew or skewer and lay on strips of cloth in a baking pan. If the fish is not oily, cut gashes on top and put strips of salt pork or bacon in them. Dredge with flour. Bake until well browned and well done. Baste frequently.

STUFFING FOR FISH

1 cup bread crumbs	$\frac{1}{8}$ teaspoonful pepper
2 tablespoonfuls melted butter	A little onion juice
$\frac{1}{2}$ teaspoonful salt	1 tablespoonful parsley cut fine

Mix in the order given. This makes a dry stuffing. A little water may be added if desired.

SALMON LOAF

1 pound can salmon	1 cup bread crumbs
2 eggs	1 tablespoonful butter
1 cup milk	1 teaspoonful salt
1 tablespoonful finely chopped parsley	

Remove the bones and skin from the fish; mix the salmon and bread crumbs; add the seasoning, butter, parsley, milk, and

beaten eggs. Mix all together thoroughly. Pour into a buttered dish and steam for an hour. When done set in the oven for five minutes.



FIG. 211. — Salt codfish and canned fish may be used.

CREAMED SALT CODFISH

Pick the salt codfish to pieces and soak in warm water for a half hour or longer, depending upon the hardness and saltiness of the fish. For one cup of fish use one cup of thin white sauce. Add the drained fish to the sauce and let

come to a boil. Just before sending to the table add one beaten egg. Do not boil after the egg is added. Serve with baked potatoes.

Nearly everyone is acquainted with baked beans, but how many people know dried peas and lentils as well?

IV. Dried beans, peas, and lentils. In many ways these dried seeds are good substitutes for meat. They are rich in protein, but of a kind that is less valuable to the body

than that found in animal foods. They are also rich in iron and phosphorus. They cost much less than meat per pound and have a higher fuel value. However, they are not so easily or completely digested. Get the cost of a pound can of baked beans and of a pound of round steak. The can of baked beans will give 583 calories; the edible part of the round steak will give 694 calories. Compare the cost of 100-calorie portions of each. Find the cost of a pound of dried beans. A pound of dried beans gives 1565 calories. Compare the cost of dried beans and canned baked beans.

The Sunnysiders prepared several jars of baked beans and some Boston brown bread one day and sent them to the lunchroom kitchen to be cooked and served. They used these recipes.

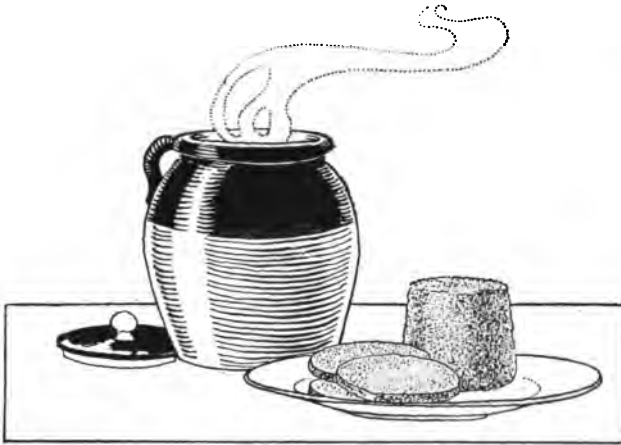


FIG. 212. — You do not need meat when you have baked beans.

BAKED BEANS

- | | |
|-------------------------------|---------------------------------------|
| 1 quart white beans | $\frac{1}{4}$ cup molasses (if liked) |
| 1 teaspoonful soda | A small onion (if liked) |
| $\frac{1}{2}$ pound salt pork | 1 teaspoonful mustard |

Wash the beans and soak in water for several hours. Drain. Cover with water, add the soda, and bring to a boil. Pour off this water and rinse the beans to free them from all soda water. Add fresh water and cook slowly until slightly softened. Drain. Put the onion into the bottom of the bean pot and add the beans. Mix the molasses and mustard with water sufficient to cover the beans. Score the pieces of pork and place on top. Bake slowly for six or eight hours. Add more water if necessary.

Since baked beans require such long cooking it is well to prepare enough for at least two meals. They are good warmed over, eaten cold, or added to soup.

BOSTON BROWN BREAD (To serve with baked beans)

1 cup rye meal or flour	2 cups thick sour milk
1 cup cornmeal	$\frac{3}{4}$ cup molasses
1 cup Graham flour	1 $\frac{1}{2}$ teaspoonfuls soda
	1 teaspoonful salt

Mix and sift the dry ingredients. Add the milk and molasses and stir well. Pour the mixture into well-greased molds and steam for three hours, then dry in the oven for a few minutes. The molds should not be more than two thirds full. (One-pound baking powder cans or coffee cans will do for the purpose.)

To steam the bread place the molds on a rack in a kettle of boiling water, allowing the water to come halfway up around the cans, and cover closely. Add boiling water as needed. Instead the cans may be placed in a steamer and set over a vessel of boiling water.

KIDNEY BEAN STEW

1 cup kidney beans	2 tablespoonfuls bacon fat or
1 small onion	beef drippings
2 tablespoonfuls rice	2 tablespoonfuls flour
2 cups canned tomatoes	1 teaspoonful salt
	$\frac{1}{8}$ teaspoonful pepper

Soak the beans overnight in cold water. In the morning remove the water in which the beans were soaked. Cover them with fresh water and put them on to cook until soft. Then add the tomatoes, onion, rice, and seasoning, and simmer until the rice is soft. There should be about three pints of stew. If not, add water. Mix the flour and fat and use to thicken the stew.

Nut butter on sandwiches or made into cream soup is palatable and wholesome. Chopped nuts used in salads or desserts offer variety. One should remember that it does not take many nuts to make a 100-calorie portion and that they should be eaten as a part of the meal, not in addition to it.

2. Nuts have high food value.

A pound of almonds gives 2940 calories.

A pound of Brazil nuts gives 3040 calories.

A pound of chestnuts gives 1098 calories.

A pound of peanuts gives 2490 calories.

A pound of pecans gives 3330 calories.

A pound of California walnuts gives 3182 calories.

Find the cost per pound of each (shelled) and compare. How many 100-calorie portions are there in a pound of each kind of nuts? How many nuts make a 100-calorie portion? Can you find out?

SUGGESTIONS FOR STUDY AND REVIEW

The Sunnysiders became so much interested in comparing the cost of meat and the foods that may be used in place of meat that they asked Miss Smith, their mathematics teacher, to let them prepare an exhibit of standard portions and the cost of each.

They weighed and measured and counted and figured and had an exhibit as good as the one that Miss Ashley had had several weeks before.

Do you think that your class could get up an exhibit of this kind? You might try. Your teacher can supply you with information in regard to the fuel value of any of the foods which these lessons have not given you.

100-CALORIE PORTIONS OF MEAT AND OF FOODS THAT MAY BE
USED IN PLACE OF MEAT

NAME OF FOOD	WEIGHT	COST PER POUND	COST PER 100-CALORIE
Cheese	0.77 oz.		
Eggs (without shell) . .	2.38 "		
Fish (whitefish) . . .	2.35 "		
Salt codfish	3.38 "		
Milk	5.1 "		
Beans, baked	2.74 "		
Peas, dry	1.0 "		
Nuts			
Almonds	0.54 "		
Brazil nuts	0.5 "		
Chestnuts	1.5 "		
Peanuts	0.6 "		
Peanut butter	0.58 "		
Pecans	0.5 "		
California walnuts . .	0.5 "		
Rump steak	1.2 "		
Smoked ham	1.5 "		
Mutton chop	1.14 "		
Pork tenderloin	1.83 "		

Go to the market and find cost per pound and then figure the cost of the 100-calorie portions. Compare the costs. You may get some ideas for preparing your exhibit by re-reading some of the lessons in this book.

LESSON 31

THE USE OF VEGETABLES IN OUR MEALS

What vegetables shall we use and how shall we prepare them?

The eighth-grade girls had spent an hour in preparing for this lesson. Miss Ashley and the class had accumulated a great many bulletins and pamphlets giving interesting information about vegetables which the girls found helpful. They had written to the Department of Agriculture and to their Agricultural College for bulletins, and to firms that sold seed for seed catalogues. Miss Ashley had assigned several topics and suggested that these and any others which the girls thought helpful might be discussed in class. That the girls understood what they read was evident from the contributions they made.

“What have you learned about vegetables that you think we should all know?” asked Miss Ashley at the beginning of the lesson. As usual the hands went up and several topics were discussed, among them those that follow.

“We should all know that it is necessary to use some kind of vegetable every day to help keep us well, especially if we have used no fruit,” began Margaret. “Vegetables contain *mineral salts* without which the body cannot get along, especially if not much milk is used. Vegetables also contain a kind of *woody fiber* called *cellulose* which gives bulk to our food and which helps to keep us well by preventing constipation. The large amount of *water* that they contain is also useful to the body. Some of the vegetables contain *sugar* and some *starch*, which help to keep the

I. Some reasons for using vegetables.

1. What do vegetables contain?

body warm and to give it power to work and others contain a kind of *protein*."

You will notice that Margaret said *some* vegetables contain sugar, some contain starch, and some protein. These foodstuffs are found in very different proportions in the various vegetables. Some have a high per cent of starch or sugar or substances similar to them and very little protein, while others have such a high per cent of protein that we put them in a class by themselves; others seem to be nearly all water.

Constance Moore and Mrs. Edwards had read several bulletins and books from which Constance had got much information. With Mrs. Edwards' help she had prepared lists of vegetables based upon special material that they contained. These she put on the board so that the class could see them.

Vegetables containing a high per cent of protein :

1. Dried peas
2. Dried beans
3. Lentils

Vegetables containing a high per cent of carbohydrate :

- | | |
|-------------------|------------|
| 1. Sweet potatoes | 5. Peas |
| 2. Lima beans | 6. Corn |
| 3. Potatoes | 7. Beets |
| 4. Parsnips | 8. Carrots |

Some iron-giving vegetables :

- | | |
|----------------|-----------------|
| 1. Dried beans | 5. Lettuce |
| 2. Lima beans | 6. String beans |
| 3. Dried peas | 7. Cabbage |
| 4. Spinach | 8. Potatoes |

Some potassium-giving vegetables :

- | | |
|-------------------|--------------|
| 1. Spinach | 7. Cabbage |
| 2. Parsnips | 8. Lettuce |
| 3. Potatoes | 9. Turnips |
| 4. Corn | 10. Celery |
| 5. Sweet potatoes | 11. Tomatoes |
| 6. Beets | 12. Carrots |

Some calcium-giving vegetables :

- | | |
|----------------|-----------------|
| 1. Dried beans | 7. Turnips |
| 2. Cauliflower | 8. String beans |
| 3. Dried peas | 9. Carrots |
| 4. Celery | 10. Cabbage |
| 5. Spinach | 11. Onions |
| 6. Parsnips | 12. Asparagus |

Do these lists interest you as they did Constance and Mrs. Edwards? Constance said that she knew now why Mrs. Edwards gave John Jr. and Baby Dorothy either spinach pulp or carrot pulp nearly every day. Growing children need to eat vegetables that contain mineral salts and these seemed especially appropriate.

Can you tell why? Do we sometimes push aside some of these vegetables just because we do not happen to like them? Should we?

If John Jr. and Baby Dorothy are encouraged to eat just a little, even a spoonful of some new vegetable from time to time, Mrs. Edwards thinks that they will learn to eat a variety of things and will have stronger bones and teeth and muscles because of it. She always presses the well-cooked vegetable through a

2. How Mrs. Edwards teaches her children to eat vegetables.

sieve so that the children will get none of the coarse fiber and gives them only a little at a time.

Do you know why the body needs iron? Potassium? Calcium? What vegetables have you eaten during the last few days? Which of these minerals did they contain?

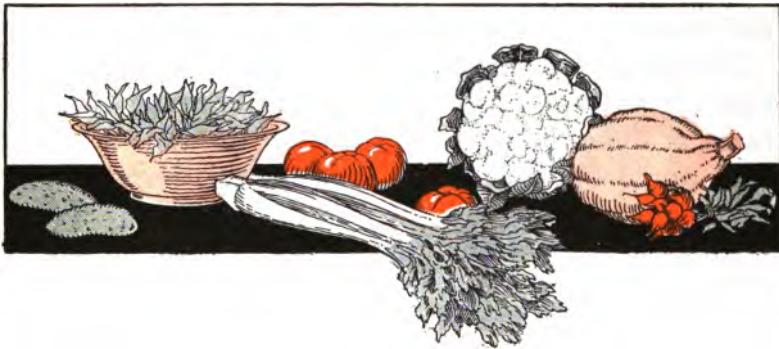


FIG. 214. — Some non-starchy vegetables.

Mrs. Edwards told Constance that since she had learned about the composition of vegetables she is much more careful in her selection of them. She said that she usually has for dinner one of the starchy vegetables or a cereal such as rice, hominy, or macaroni, and at least one, sometimes two, non-starchy vegetables (Fig. 214). If she serves two that are not starchy she chooses one to be cooked and the other to be served as a salad. She tries to choose those that do not seem to be very much alike. For example, if she has potatoes for dinner she

II. What vegetables shall we choose for dinner?

may add buttered beets and lettuce, not *spinach* and lettuce, for they are too much the same; if she serves creamed cauliflower she does not serve cabbage salad, for cauliflower and cabbage are too much alike. Suggest some combinations that you think would be good. If you have enough of either rice or potatoes, is it necessary to serve both at the same meal? Macaroni and potatoes, or parsnips and rice?

Instead of serving at the same time two or three foods that are very much alike in value it is better to serve them at different meals and to save the time and fuel that would be necessary to prepare two for the same meal.

Another topic which the class thought important to know about was the proper cooking and serving of vegetables.

Many vegetables are served uncooked in the form of salads. (See page 87.) These must always be fresh and crisp and very carefully washed. All grit and insects must be removed and the vegetables should be dried and chilled before serving.

III. Cooking and serving vegetables.

1. Some vegetables are used uncooked.

2. Preparing vegetables for cooking.

Vegetables that are to be cooked should also be crisp and firm. The sooner vegetables are cooked after gathering the better is the flavor. If they have lost their freshness and firmness they should be soaked in cold water until they become plump. They should always be thoroughly washed. When paring vegetables great care

should be taken not to be wasteful. Only the thinnest parings should be taken from vegetables, unless as in the case of cucumbers, egg-plant, and a few other vegetables disagreeable flavors may be removed by thicker paring.

a. Avoid waste in paring.

Vegetables that form in heads, such as cabbage and cauliflower, if they are to be cooked whole, should be soaked, heads down, in cold, salted water to draw out any insects that may be hidden. Peas should be shelled as soon as possible after picking. The husks and silk of corn, the "strings" on beans, and the seeds of winter squash and pumpkins should be removed before cooking.

Since vegetables are so important for the mineral salts they contain they should be cooked in such a way that the least possible amount will be lost.

The mild-flavored vegetables, such as new peas, spinach, asparagus, young carrots, and summer squash, should be cooked in such a small amount of water that there will be no more liquid than may be seasoned and served with the vegetable. What happens to the mineral matter if vegetables are cooked in large amounts of water and the water is poured away?

3. Save the mineral salts.

Certain vegetables, such as onions, cabbage, old turnips, and carrots, are improved in flavor if cooked in a large amount of water. Some valuable mineral matter may be lost but more of the vegetable may be eaten because of the more agreeable taste. Flavors will

pass off in steam, so it is well to cook these vegetables uncovered. Vegetables also keep their color better if kept uncovered while cooking. Suggest another way of cooking vegetables in order to retain the largest amount of mineral salts. How can one use the water in which vegetables are cooked?

Probably the most generally used vegetable in our country is the potato. It appears on most dinner tables nearly every day. How shall it be cooked? To save all the mineral matter how may it be cooked? What must be done in order to cook the starch perfectly and to have the potatoes good and mealy? Why should the water be poured off when the potatoes are done and the steam be allowed to escape? Why should a baked potato be cracked open when done? Sweet potatoes may be cooked in the same way as white potatoes.

If we want the members of our families to eat more vegetables, we must know how to make them appetizing.

4. Cooking the starch in potatoes.

5. Proper cooking makes vegetables palatable.

The addition of milk, butter, egg, or cheese in the form of good sauces often makes them more palatable and, too, gives added food value. It would be difficult to eat 100-calorie portions of many vegetables at dinner for the amount would be too bulky, so we may add something else to bring up the food value as well as to modify the flavor. Notice the 100-calorie portions of some of the vegetables which the class weighed out at the Ellen H. Richards School (Fig. 187).

The Sunnysiders learned how to prepare vegetables in various ways. Miss Ashley let each group of two girls choose from the table a vegetable to cook. The class cooked only those that had been measured out to see how large the amounts would be after cooking. How surprised they were at the spinach and cabbage! Do you know what happened?

Miss Ashley provided the girls with a sheet of recipes as given below and asked each to use the recipe she chose. At the end of the lesson there were many interesting results to compare.

BAKED POTATOES

Select medium-sized, smooth potatoes; scrub until the skins are almost white. Bake in a very hot oven until soft — about 45 minutes. When done press between the fingers to break the skin in order that the steam may escape. Just before serving break open a little more and add a piece of butter.

STUFFED POTATOES

Cut baked potatoes in half, remove the pulp, and mash it. Moisten with milk and season with butter, pepper, and salt. Fill the skins with this mixture, dot with butter, and set into a hot oven for about ten minutes. For variety beaten egg, grated cheese, or chopped meat may be added to the mixture before the cases are filled.

TO COOK SPINACH

After spinach or any other tender greens have been washed put it into a kettle without adding any water. Enough water will adhere to the leaves. Cook for fifteen minutes, do not drain,

turn into a colander, and press through or put into a bowl and chop rather fine. Return to the kettle, simmer for ten minutes, and season with butter and salt. Garnish the dish with slices of hard-cooked egg or egg which has been forced through a sieve.

One peck of spinach will make about three cupfuls when cooked this way.

TO COOK CABBAGE

Quarter a head of cabbage. Soak for a half hour in salted water to draw out any insects. Cut the cabbage into slices or small pieces and put into boiling, salted water. Cook until tender or for about twenty-five minutes. (Do not cook until brown and tough.) Drain and season with butter or cream or white sauce.

CREAMED AND ESCALLOPED VEGETABLES

Wash and pare or scrape such vegetables as carrots, white turnips, celery, or potatoes. Cut into one half inch cubes or small slices and boil in salted water until tender. Drain, add white sauce, and serve hot. For escalloped vegetables, after combining with white sauce, put into a buttered baking dish, sprinkle with buttered crumbs, and bake in the oven until hot and browned. Cabbage and onions, also, may be creamed or escalloped. Use 1 cup of white sauce to 2 or 3 cups of cooked vegetable, and $\frac{1}{4}$ cup of buttered crumbs for the top. These vegetables may be seasoned simply by adding butter, pepper, and salt.

FRESH PEAS

Remove from the pods as soon as possible after picking. Wash. Use only enough water to cover and cook in an uncovered kettle about twenty minutes. Do not pour off the water. Add salt, butter, milk, or cream.

ASPARAGUS ON TOAST

Cut off the woody part and scrape the lower part of the stalks. Wash well and tie in bunches. Stand on the cut end in a tall saucepan (the top of a double boiler is a good utensil) (Fig. 215). Add boiling water sufficient to come up to the heads of the stalks. Cook until tender, — about twenty or thirty minutes. Arrange the bunches on dainty slices of buttered toast. Remove the string. Season with butter and salt or add a thin cream sauce.

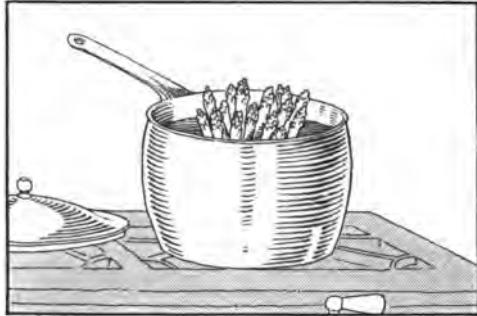


FIG. 215.— This bunch of asparagus is standing on the cut ends while cooking.

BEETS

Do not cut the leaves too close to the root. Scrub well. Cook in boiling, salted water until soft. Drain, reserving a little of the water in which the beets were cooked. Plunge into cold water to remove the skins easily. Cut into slices or cubes and add butter, pepper, and salt and reheat, or add a sour sauce.

SOUR SAUCE

Melt two tablespoonfuls of fat and mix with it two tablespoonfuls of flour. Add a half cup of the beet water, one fourth cup of vinegar, one fourth cup of milk, one teaspoonful of sugar, and a little salt and a little pepper.

CAULIFLOWER AU GRATIN

Remove the leaves from a head of cauliflower, cut off the stalk, and soak in cold, salted water for a half hour. Put it in a piece of clean cheesecloth and cook in boiling, salted water, uncovered, until tender. Drain well. Place the whole head on a serving dish, sprinkle with grated cheese, cover with buttered crumbs, and place in the oven to brown the crumbs. Pour a cup of hot, thin white sauce around the head just before serving.

FRIED EGGPLANT

Cut the egg plant into one half inch slices and pare. Put into salted water, cover with a plate, and weight down. Let stand an hour. Mix together one egg and a tablespoonful of water. Wipe the slices of eggplant, dip into the egg mixture and then in fine bread crumbs. Let dry. Fry in deep fat or sauté until brown.

Ordinarily the average cook has small amounts of vegetables left over from dinner or she may have cooked enough to serve for a second meal. Not one spoonful of cooked vegetable should ever be wasted. The small amounts of left-overs may be added to soup stock or cream soups may be made. Those that make pleasing combinations may be put together and a new dish made. Carrots and peas, peas and potatoes, corn and beans, and tomatoes and corn are good combinations.

When reheating vegetables it is well to try new ways of preparing them. Do not always "fry" potatoes. Make a dish of creamed potatoes or escalloped potatoes. Add grated cheese or hard-cooked egg to change the

6. Reheat-
ing vege-
tables.

flavor. Serving reheated foods in attractive dishes often makes them more welcome.

Miss Ashley's class spent a class period in making new dishes out of the vegetables that they cooked in this lesson.

SUGGESTIONS FOR STUDY AND REVIEW

1. What would you say to convince someone that vegetables should be used in the diet?
2. From the lists given, make a list of vegetables that contain iron, potassium, and calcium.
3. Suggest some ways of getting children into the habit of eating vegetables.
4. How can vegetables be cooked so that the mineral salts will not be lost?
5. Make a list of all the ways of cooking vegetables that you know.

LESSON 32

DESSERTS FOR DINNER

What desserts shall we serve and how shall we make them? The Sunnysiders try to answer the question.

Have you ever thought about the amount of sweet food that the people in our country eat? As one passes along the streets and notices the many windows filled with pastries and confections, and sees the crowds of people in tea rooms and drug stores drinking sodas and eating candies it is not so difficult to realize that over 8,000,000,000 pounds (4,000,000 tons) of sugar

**I. The
sugar
industry
in the
United
States.**

are used annually by the people of the United States. This amounts to about 90 pounds per capita per year, or about one fourth pound per capita daily. In addition to cane sugar, maple sugar, sirup, molasses, and honey are also used to sweeten foods.

How much sugar does your family use each week? In what way is it used?

There seems to be no doubt that sweetened foods are very much liked by most people. Those foods that are very much sweeter than others are called desserts and are usually eaten at the close of luncheon or dinner. One should remember, however, that they should be considered a part of the meal and should not eat them in addition to the meal.

**II. Des-
serts are
popular
dishes.**

There are so many different kinds of desserts that there should be some way of helping us to decide which ones to serve at a meal. The Sunnysiders talked the problem over and came to several conclusions.

**III. What
desserts
shall we
choose?**

The dessert chosen should depend upon the rest of the meal. If the rest of the dinner is hearty no dessert or only a light one is needed; if it is light, a hearty dessert may be served; if the main part of the meal contains a good deal of starchy food, such as potatoes and lima beans, rice pudding or bread pudding would not be so acceptable as a fruit dessert of some kind. On the other hand, if fresh vegetables and a green salad are a part of the

**1. The
dessert
should help
to balance
the meal.**

meal, a tapioca pudding or rice custard would go well with it ; rich desserts such as mince pie or suet pudding served at the same meal with meat and gravy and salad dressing may be difficult to digest, while if eaten with a dinner made up largely of fresh vegetables and fruits they would cause no trouble.

“What is meant by a ‘light dessert’?” questioned one of the girls.

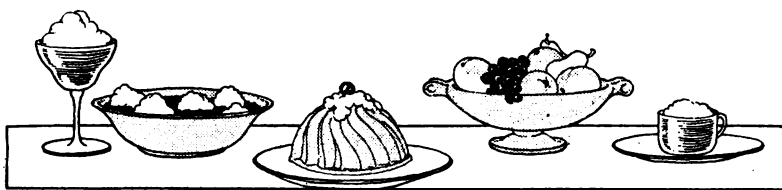


FIG. 216. — Some light desserts.

Miss Ashley explained that a light dessert is one which does not contain much sugar and butter or other sweetening and fat, — one which does not have high fuel value. A dish of fresh or stewed fruit, not very sweet, a serving of junket, gelatin desserts with little or no cream, fruit ices, and sponge cake, are all light desserts. Frosted butter cake, double crust pies, and steamed suet puddings or puddings with sauce made of butter and sugar are considered rich or hearty desserts. Any food that remains in the stomach a long time is considered hearty. Fat remains longer than starches or proteins, and when much of it is

a. What are light desserts?

b. What are rich or hearty desserts?

used in the making of the dessert we have a hearty dish.

There are also a great many desserts which come in between, being neither very light nor very rich. These should be chosen to supplement the other foodstuffs eaten, rather than to duplicate them, as was suggested above.



FIG. 217. — Mince pie, plum pudding, and rich cake are hearty desserts.

Other factors which should be considered in choosing the dessert in most homes are the amount of time, labor, fuel, and money to be spent. Apple sauce with bread and butter gives practically the same food value as do apples baked between two crusts and served as pie. If time and labor must be considered the pie may have to be forfeited, and no doubt the stomach, if not the palate, will be just as well pleased. Or, if the oven is being used for other purposes, the apples may be baked and both time and fuel saved.

When the oven is being used it is always wise to do just as much cooking in it as possible, to use the heat. By planning several meals ahead of time one may save a great deal of time and fuel.

Miss Ashley told the girls that when she baked

2. Time, labor, fuel, and cost should be considered.

biscuit or muffins for breakfast she frequently baked apples or custard or even a pie for dinner. When she planned to have a roast for dinner she also planned to have a dessert that could be cooked in the oven at the same time, such as cottage pudding, apple dumplings, Brown Betty, rice, or bread pudding. In the summer time, when one wants to have just as little heat in the kitchen as possible, it is scarcely necessary to have any cooked desserts. Fresh fruits, junket, gelatin, and frozen dishes are all easily prepared and seem more appropriate than elaborate cooked desserts. Rich foods of all kinds are undesirable in warm weather because of their heat-producing qualities.

3. The season of year makes a difference.

When the Sunnysiders were planning what desserts they would like to serve they found that in previous lessons they had already learned how to make a great many. Junket, all kinds of fresh and canned fruits, pie, Dutch apple cake, shortcake, cake, and cookies were on their lists, and nearly every girl had prepared these at home and at school more than once.

As the days were becoming warmer and the girls were looking forward to helping with the preparation of meals during the summer, Miss Ashley suggested that they learn how to prepare appropriate hot weather desserts. However, those they made may be used at any time of year.

IV. Some desserts that you can learn to make.

In the summer time, especially, when not much meat should be eaten, milk and eggs can be used to good

advantage in various ways. They may be combined to make very good desserts.

Dorothy Vincent said that when her family was in the country in the summer and could use eggs more freely than in the winter, her mother served custards very frequently. Mrs. Edwards told Constance that she, too, made custards rather often, because they were good for the children, and because John Jr. and Baby Dorothy liked them. She said that ordinarily she used only half as much sugar as the recipes called for because she did not want the children to get into the habit of wanting too much sweetened food. These are some of the recipes which Miss Ashley gave the girls and which they used at school and at home.

1. Milk
and egg
mixtures.

FLOATING ISLAND (BOILED CUSTARD)

2 cups hot milk	$\frac{1}{8}$ teaspoonful salt
2 or 3 eggs	$\frac{1}{4}$ cup sugar
$\frac{1}{2}$ teaspoonful vanilla or lemon extract	

Pour the hot milk slowly over the beaten eggs to which the sugar and the salt have been added. Stir constantly. Put into the double boiler to cook, stirring until the custard thickens slightly and coats the spoon. Add the flavoring, and strain into a serving dish. Allow to cool and then place in the refrigerator to become very cold.

Little "islands" of whipped cream, beaten white of egg sweetened, or bits of jelly may be put on top just before serving.

BAKED CUSTARD

The above mixture may be put into custard cups or into an earthen dish and baked until a knife when inserted comes out clean. It is well to set the dishes in a pan of hot water while baking. Can you tell why?

Do you know what will happen if egg and milk mixtures are cooked too long? At a temperature that is too high? If eggs are scarce or high priced how could this recipe be modified? If starch or flour is used to help thicken the milk what difference would you make in the cooking of the custard?

Compare the two following recipes with each other and with that for Floating Island. Notice the difference in the amount of starchy material used and in the length of time of cooking.

TAPIOCA CUSTARD PUDDING

2 cups hot milk	$\frac{1}{4}$ cup sugar
3 tablespoonfuls minute tapioca	$\frac{1}{8}$ teaspoonful salt
1 or 2 eggs	$\frac{1}{2}$ teaspoonful flavoring

Add the tapioca to the scalded milk, stirring constantly. Cook for fifteen minutes. Add the sugar to the yolks of eggs, beaten slightly. Stir the hot milk mixture into the eggs and sugar and return to the double boiler to cook until thick. This will require only three or four minutes. Allow the mixture to cool slightly and then cut into it the beaten whites of eggs. Add the flavoring.

(By way of variation this pudding may be poured over fresh fruit or one fourth cup of grated cocoanut may be added.)

CORNSTARCH BLANC MANGE

2 cups milk	$\frac{1}{4}$ cup sugar
$\frac{1}{4}$ cup cornstarch	$\frac{1}{8}$ teaspoonful salt
$\frac{1}{2}$ teaspoonful flavoring	

Mix the cornstarch, sugar, and salt with a half cup of the milk. Heat the rest of the milk. Stir the first mixture into the hot milk and continue to stir until the whole begins to thicken. Cook for about thirty minutes. Add the flavoring, pour into a mold, and set aside to cool. To serve, remove from mold and serve with cream and sugar if desired. Jelly or fruit may be used with this pudding, too.

When Margaret and Dorothy were asked to find out why the cornstarch pudding was cooked so much longer than the tapioca custard they reported that in the manufacture of minute tapioca the starch grains of which it is composed are partially cooked so that it does not require so long cooking as the raw cornstarch to make it palatable and easily digested. Pearl tapioca, however, because it is in larger form and is so dry and hard, is better if soaked in milk or water first and then cooked slowly for a long time.

There are many delicious desserts in which other forms of starch and cereal products are used with milk.

They are usually a little cheaper than those in which eggs are combined and when well cooked and nicely served are very good and wholesome. A great favorite in Margaret Langley's family is creamy rice pudding. Margaret said that her mother made this pudding when she had a fire in

**2. Cereals
may be
made into
desserts.**

the cook stove or when she was going to use the oven for cooking other things, too, for it required long, slow cooking. One reason why Mrs. Langley likes to make this dessert is that Mr. Langley and the boys enjoy it so much, especially when it is sweetened with raisins or dates that have been cut up into small pieces.

CREAMY RICE PUDDING

1 quart milk	$\frac{1}{4}$ cup sugar
$\frac{1}{3}$ cup raw rice	$\frac{1}{2}$ teaspoonful salt
Grated rind of $\frac{1}{2}$ lemon	$\frac{1}{4}$ teaspoonful grated nutmeg
$\frac{1}{2}$ cup raisins or chopped dates	

Wash the rice and raisins or dates. Mix all the ingredients together and pour into a buttered pudding dish. Bake for three hours in a very slow oven, stirring several times during the first hour of baking.

Miss Ashley said that a pudding of this kind might take the place of potatoes and meat in the meal. Do you see why? What foodstuffs are found in the pudding? Do you think you could find the *fuel value* of the pudding? Try to do it. You know the value of milk, rice, sugar, and raisins, so it will not be a very difficult problem. Some time when you make this dessert at home try to find the value of one serving. Margaret Langley did this one Saturday and surprised Miss Ashley by bringing her results to class. This gave the other girls an idea and they found the fuel values of several other dishes made at home and at school.

Another very convenient basis for desserts and one which many children are fond of is gelatin. Do you know what gelatin is and how it is made? You would not think to look at it that it is an animal product, but it is. It is made from the bones, hoofs, and hides of animals. Do you remember how the soup stock turned to "jelly" when it got cold? The gelatin that you buy at the store is the same substance that is found in soup bones and will cause the liquid in which it is dissolved to "jelly."

Gelatin in itself is not an important food, but it is a pleasing and convenient material to combine with other foods to hold them together and to make them attractive. Miss Ashley said that she frequently uses a gelatin dessert for Sunday dinners in the summer, for she can make it Saturday morning and it is not injured by standing in the refrigerator all night. She gave the girls the following recipe and told them that they could modify it by adding fresh fruits of various kinds.

LEMON JELLY

2 tablespoonfuls granulated gelatin	2½ cups boiling water
½ cup cold water	1 cup sugar
½ cup lemon juice	

Soak the gelatin in the cold water for twenty minutes; add the boiling water and sugar but stir very little. When the sugar and the gelatin are dissolved, add the lemon juice. Strain through a cloth wrung out of hot water into a mold and set aside to cool. When cool put into the refrigerator to set.

Pieces of orange, banana, white grapes, and other fruits may be added just as the gelatin begins to harden, or the gelatin may be garnished with fruit when served.

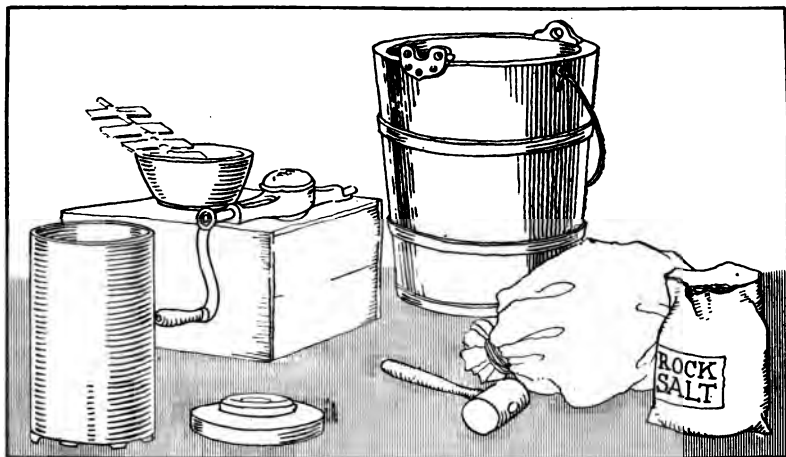


FIG. 218. — Frozen desserts are popular and are not difficult to make.

Of all the desserts commonly used, probably none are more enjoyed, especially by boys and girls, than ice creams, sherbets, and ices. They are appropriate in any season but are particularly good in warm weather when one wants something cooling and refreshing. They may be made very nourishing, too, according to the amount and kind of material used in the making.

4. Frozen
desserts
are popular.

Of course ice creams made of cream, milk, sugar, and eggs have a higher fuel value than ices made of fruit juice, sugar, and water.

Miss Ashley gave her classes the following recipes, which they used at school and at home. Maybe you will enjoy using them sometime. No doubt you will find many others, too, which you will like to file in your recipe box just as the Ellen H. Richards girls did.

VANILLA ICE CREAM

2 cups thick cream and
2 cups milk,
or
4 cups thin cream
1 cup sugar
1 tablespoonful vanilla

Mix the cream, milk, sugar, and vanilla. Put the mixture into a freezer and freeze.

FRENCH ICE CREAM or FROZEN CUSTARD

1 pint milk	1 pint cream
2-4 eggs	$\frac{3}{4}$ cup sugar
1 tablespoonful vanilla or other flavoring	

Scald the milk, and pour gradually into beaten eggs; return to the double boiler and cook like a soft custard. When it coats the spoon remove from the fire, add the sugar, and cool. Combine the custard and cream, flavor, and freeze.

The pulp of two bananas may be added to the custard before freezing (mash the bananas and beat with a Dover egg beater). Add the sugar as desired.

Crushed strawberries, sweetened, may be added when the mixture is partly frozen.

Hot chocolate sauce may be poured over plain ice cream when served.

MILK SHERBET

4 cups milk
 Juice 3 lemons

1½ cups sugar

Mix the juice and sugar, stirring constantly while slowly adding the milk. If added too rapidly, the mixture will have a curdled appearance, which is unsightly, but it will not affect the quality of the sherbet. Freeze.

PINEAPPLE SHERBET

1 quart water
 2 cups pineapple juice and pulp

2 cups sugar
 1 teaspoonful gelatin

Boil the sugar and water for ten minutes. Pour over the gelatin soaked in a little cold water. Add the pineapple. Cool and freeze. (Orange may be used in the same way as pineapple; if lemon is used, use only ½ as much — 1 cup lemon juice.)

LEMON ICE

4 cups water
 ¾ cup lemon juice

2 cups sugar

Make a sirup by boiling the water and sugar for 20 minutes. Add the lemon juice, cool, strain, and freeze.

(Other fruit juices may be used instead of lemon; but *some* lemon juice adds flavor to every ice.)

After making frozen desserts at school and in the apartment the girls concluded that they were not at all hard to make and decided to use them often during the summer.

At first they thought that getting the ice ready was going to be difficult but when they put it into a strong canvas bag and pounded it with a heavy wooden mallet which Miss Ashley had for the purpose, it did not seem to be very hard after all. After the ice was broken into small pieces it was emptied into a pan and the bag was hung up to dry.

a. Getting the ice ready.

Miss Ashley had the girls mix fine rock salt with the ice in the proportion of one part of salt to three of ice.

b. Why mix salt with the ice?

Salt, she said, causes the ice to melt and in turn the salt is dissolved in the liquid. It requires heat to bring about these two changes and part of the heat is provided by the mixture in the can. If enough ice and salt surround the can, sufficient heat is removed from the mixture inside to cause it to freeze.

“Mr. Lockman told us about the same thing in our general science class last winter,” added Dorothy when Miss Ashley had finished. “He said that if we wanted to freeze ice cream very quickly we should use more salt than the one-to-three proportion, but that the ice cream might be coarse grained. We learned, too, that snow could be used for freezing ice cream in the winter. When we mixed one pound of salt with three pounds of snow the thermometer went way down to -6° F.” Some day after a snow storm you might try freezing a dessert with snow and salt as Dorothy did.

After the ice and the salt are mixed the freezer may be packed. The covered can with the dasher in place

should be fitted into the socket in the bottom of the pail; the dasher and the upper part of the freezer should be carefully adjusted; and the cross piece over the top should be clamped down. Then the space between the can and the wooden part should be well packed with ice and salt to a height considerably above the mixture in the can. The crank should be turned several times while the ice is being put in, and after the freezer is packed should be turned slowly and steadily until the cream is almost frozen. It may then be turned rapidly until it can no longer be turned.

c. Packing the freezer.

d. Freezing and packing.

When the cream is frozen the crank should be removed and the salty water carefully wiped from the cover and the upper part of the can; not a drop of salty water should get into the cream. The dasher should then be taken out, the cream scraped from the side of the can, packed down, and covered. A cork should be put into the hole in the cover. If the cream is to stand for a while, — and it should in order to ripen, — the water may be drawn from the freezer and replaced by fresh ice and salt. The freezer should be covered with an old rug or a blanket to keep the cold in and the heat out.

Miss Ashley told the girls how she and Miss Roberts made ice cream in camp one summer when they had no freezer. She said that she took a tall tin can, sometimes a pound baking powder can or a coffee can, and packed it in a wooden

e. A home-made freezer.

bucket just as one would a regular freezer. Every once in a while she scraped the frozen mixture from the sides of the can with a knife. This is a very easy way to make ice cream when only a small amount is desired.

Should you make ice cream at home or at school be sure to care for the freezer. It should be cleaned. The can and the dasher should be scalded and kept dry. The wheel and the crank should be oiled occasionally and the extra oil wiped off. The tub should not be allowed to dry out.

Salt water should not be poured on the grass or on the plants, for it will kill them.

SUGGESTIONS FOR REVIEW

1. What will help you to decide upon the dessert that you will serve for dinner or for luncheon?
2. Write a list of desserts which you think appropriate for winter. For summer.
3. Suggest several which you think are inexpensive.
4. How may the number of eggs used in custards be reduced?
5. When combining uncooked starchy foods with eggs in making custards or cereal puddings, what care must be taken?
6. What is gelatin and where is it obtained?
7. Why is salt mixed with ice when ice cream is to be frozen?
8. See whether you can estimate the number of calories in vanilla ice cream and in lemon ice.
9. Which would be the better dessert to serve with a "light luncheon"? With a hearty dinner?



CHAPTER VII

KEEPING WELL AND HAPPY

Have you ever thought how many things there are that contribute to one's health and happiness? The Ellen H. Richards girls talked about this question one day and were surprised at the many things that are necessary to keep the body strong and healthy. They concluded that where people live as closely together as they do in cities and towns each person is responsible for the health and happiness of the others, and that it becomes the business of each person to know and to do her part well or others will suffer through the neglect.

The home maker's share of responsibility in this respect is very large because the home is really the center of things. What goes on in the separate home has its influence on every other home in the neighborhood.

If one family in a neighborhood is careless in time of illness, every other family may be endangered; if a housekeeper pays little attention to sanitary regulations, if she does not keep her house clean and it becomes infested with cockroaches or other insects, if she is careless about the disposal of garbage or about keeping the premises tidy, the whole neighborhood suffers. This is true when families live in separate houses, but is even more important to think about when they live in apartment houses.

The families who lived in the Sunnyside Apartments were very considerate of each other and indeed of the whole neighborhood. They tried to make their neighborhood a desirable one to live in. The mothers and fathers and school children of the community came together occasionally and talked over the things of common interest. They suggested ways of making the neighborhood beautiful and attractive, as well as sanitary, and agreed among themselves to do definite things. Different groups undertook different pieces of work.

The school boys and girls because of their especial interest in their school grounds and building agreed to keep them looking well. They were careful not to throw papers, fruit skins, and other refuse in the yard. They agreed to look after the trees and shrubbery that were planted and the window boxes that were provided for the schoolrooms. Miss Ashley said that this kind of work was really home-making work, that

homes were no longer limited to individual houses or to apartments. Actually doing something for the neighborhood created an interest in it, and among those

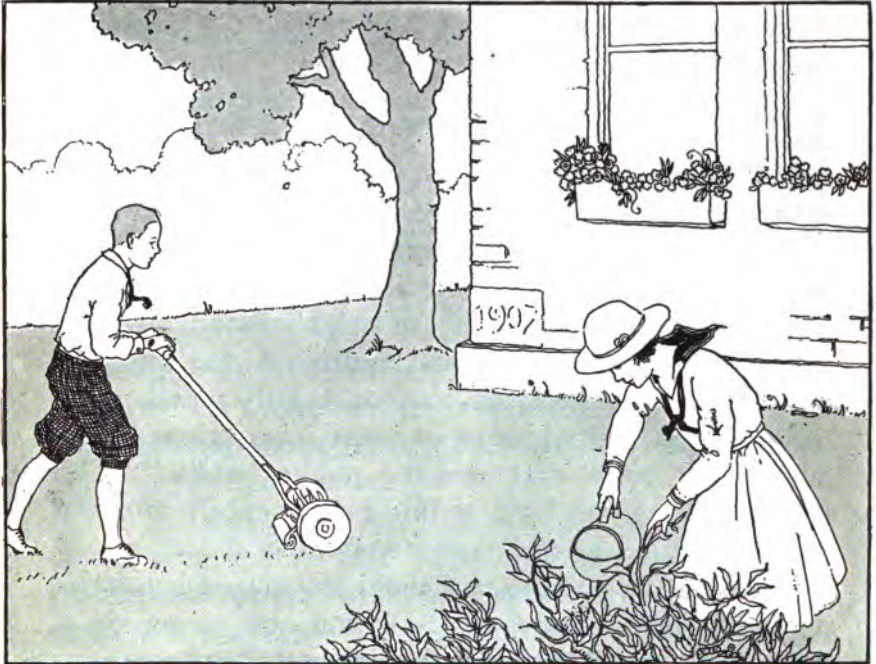


FIG. 219. — The boys and girls of the Ellen H. Richards School help to keep the yard looking well.

most enthusiastic were the girls in the household arts classes. They tried in their school work to keep up with questions that were being discussed in the neighborhood. The following lessons will give you an idea of some of the problems that concerned them.

LESSON 33

CLEAN-UP DAYS IN COMMONWEALTH CITY

The household arts classes learn how to get rid of household pests.

When the Department of Public Health of Commonwealth City announced its "Clean-up campaign" the household arts classes entered into it with great enthusiasm. Miss Ashley was a member of the committee to organize the work in her district and was responsible for acquainting the school children and their parents with the necessity of keeping up, and in some cases improving, the sanitary conditions of the neighborhood. During the week outside speakers addressed the morning assemblies at school, on various health topics. One subject that proved to be of great interest was "Flies and other pests that menace public health." This lecture was given by a public health expert and was well illustrated by means of stereopticon slides.

After the lecture the household arts classes continued to study about household pests and how to get rid of them. Perhaps you, too, will be interested to know some of the habits of these harmful insects and will do your share to help exterminate them.

One of the most disgusting and the most dangerous of the group is the common house fly. The fly seems rather harmless as you look at it, but after you once know what places it frequents and what its habits of living are you must regard

I. The school takes part in the clean-up campaign.

II. Flies and their habits.

it as a deadly enemy. There is no place too filthy for the fly to live. It is usually born in filth and makes its home in manure piles, dirty spittoons, garbage cans, or decaying refuse of all kinds. But it is not content to stay there ; it comes straight from these repulsive places with all kinds of dirt and disease germs on its body, legs, and wings and, without even wiping its feet or asking your permission, lights on the food on the table, takes a walk on the edge of the glass of milk, crawls over the icing on the cake, sometimes walks all over the nipple on the baby's bottle, which may not be cleansed before the next using, or feasts on the sugar in the sugar bowl, which in itself is not only disgusting but dangerous. Of course some of the filth it carries is deposited on whatever the fly touches, and no one can tell just what the result will be, for no one knows what place the fly last visited.

We do know, however, that flies are responsible for distributing germs that cause typhoid fever, tuberculosis, cholera, summer complaint, dysentery, and other diseases. The common house fly is sometimes called the "typhoid fly" because it has been found that flies are directly responsible for the prevalence of typhoid fever in some localities.

1. The fly is filthy.

2. Flies are responsible for disease.

They breed and feed in places where typhoid germs are likely to be found, and if for no other reason than this we should try to get rid of every single fly.

We are also told that in some localities where

little attention is given to sanitary conditions, and where babies and their food are not protected against flies, there is twice as much diarrhea and summer complaint among babies as occurs in those places where protection is given. Flies should never come in contact with anything that the baby eats or plays with.

It has been estimated by experts whose business it is to make careful studies and investigations that a fly may carry more than 6,000,000 bacteria on its body. Just think of that! What if it had just been feeding upon tuberculosis sputum and then visited one of us? We would avoid that fly, wouldn't we? But you see it is necessary to be suspicious of all flies, for no one can tell where they have been. One expert tells us that a single flyspeck has been found to contain 5000 tuberculosis bacilli. This shows that the fly carries disease germs on the inside as well as on the outside of its body. No doubt you are wondering how it is possible for such a little thing to carry so many germs on its body. Well, to begin with, the germs themselves are exceedingly minute. Then, too, the fly's feet, legs, and body are covered with many hairs and bristles. Each of its feet is provided with two little pads which bear tiny hairs. These hairs secrete a sticky fluid that holds the fly to the ceiling on which it walks. The hairs on the body and legs and the sticky footpads entangle all kinds of germs in great quantities, and the fly distributes them on every-

**3. How
flies carry
germs.**

thing it touches. The accompanying figures will give you a good idea of the structure of the fly (Fig. 220), and you can see for yourself how many little places there are for things to attach themselves to. Surely no one wants to have flies around. They are both filthy and are evidence of filth in the neighborhood and in the

home in which they are allowed to remain.

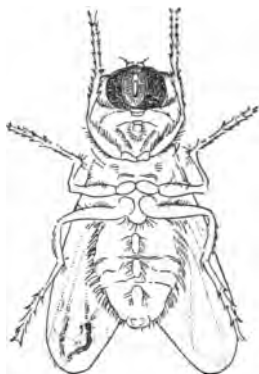


FIG. 220. — This will help you to understand how the fly may carry so much filth.



As girls in the home what can we do to get rid of them and how

can we protect ourselves against flies?

III. How to protect ourselves against flies.

1. We can do our part to destroy all breeding places. We can keep the garbage cans clean and tightly covered. If we happen to be in camp or in the country we can sprinkle lime or ashes in the outdoor toilet.

2. We can help keep the flies out of the house. All doors and windows should be screened or be provided with netting of some kind, and the fly swatter should be on hand to get the occasional fly that may come in. If flies are killed by swatting, the dead bodies should be removed and destroyed, not allowed to remain where they may have fallen.

1. Breeding places should be destroyed.

2. Doors and windows should be screened.

3. We can catch or trap flies and then destroy them.

Sticky fly paper may be used and is very effective. The paper should be fastened securely to something

3. Flies may be caught or trapped.

so there will be no danger of its turning over and causing someone extra work. The sheet should be replaced by a clean one often enough to prevent this method of catching flies from becoming too disagreeable.

4. We can kill the first flies of

4. Kill the first flies of the season.

the season, for it is these early flies that are responsible for the swarms that follow. Be on the lookout during the first warm days for the stray flies that are coaxed out of their winter hiding places by the fine

spring weather. Do you care to know why this is so important? One female fly lays between 120 and 150 eggs at one time. It requires only from ten to fourteen days for these eggs to become full-grown flies. If only half of these 120 flies should lay a lot of eggs do you see what would happen? It has been estimated by someone that one female fly by laying four

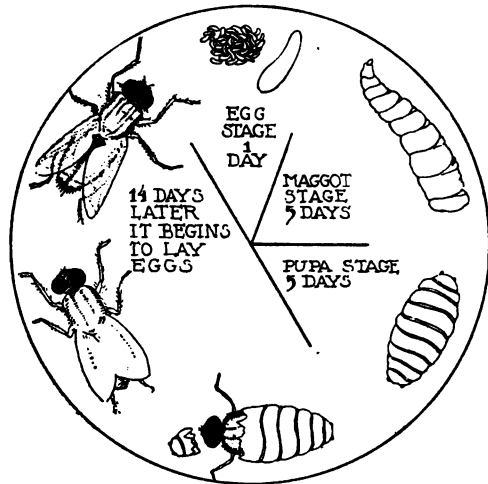


FIG. 221. — Kill the first flies of the season. Study this picture to find the reason.

batches of eggs in one season could be responsible for producing over 5,598,720,000,000 flies! Do you think you see a reason for killing the first flies of the season?

5. We can start or join in fly campaigns just as the boys and girls in Commonwealth City did. Fly campaigns have been responsible for helping to clean up many of our large cities, and school children have been great helpers. What can you do in your home and in your town?

5. Start a fly campaign.

Another harmful and annoying pest which every home maker as well as every boy and girl should do her part to exterminate is the mosquito. In some localities there are species of mosquitoes that carry malaria, and there is at least one species that carries yellow fever. Even though all kinds of mosquitoes are not responsible for distributing disease, they are most irritating and may take the pleasure out of days and nights during their season. Like flies, mosquitoes may be gotten rid of by destroying their breeding places. Mosquitoes breed in stagnant water, in quiet pools, rain barrels, roadside ditches, old tin cans, watering troughs, old tree trunks, in fact in any water that does not move rapidly enough to disturb them. Puddles, ponds, and swampy ground are ideal breeding places. The eggs are laid on the surface of the water in masses of from 75 to 300 eggs. After twenty-four hours or more they hatch into mosquito

IV. Mosquitoes and our share in getting rid of them.

1. Mosquitoes breed in stagnant water.

“wigglers,” and after other changes finally become full-grown mosquitoes (Fig. 222).

The best way to destroy the breeding places is to empty all receptacles containing water. Old tin cans and other unnecessary containers should be removed from the premises; rain barrels, if there are any, should be screened and eaves troughs should be cleaned. Gutters and ditches should be drained, while water stand-

2. Breeding places should be destroyed or should be covered with oil.

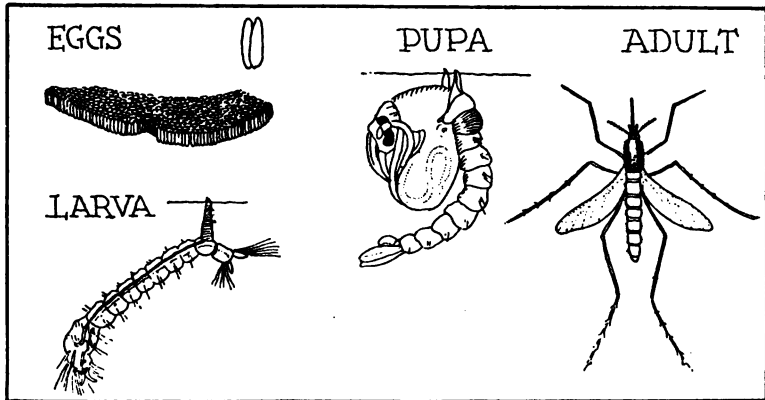


FIG. 222. — Showing the several stages in the life of a mosquito.

ing in ponds and swampy places, if it cannot be drained off, should be covered with kerosene oil every two weeks in the summer.

It is just as necessary for girls and women to be interested in this kind of work as it is for boys and men to be. If you live in a locality where mosquitoes are a nuisance see what you can do to help get rid of them.

Another pest, most disgusting because of its filthy habits, is the cockroach. Cockroaches are sometimes called croton bugs or water bugs. They frequent pantries, kitchens, laundries, and other places that offer food, warmth, and moisture. They do their foraging when these places are deserted, usually in the dark.

V. Cockroaches are also disagreeable pests.

Roaches are so obnoxious because they, too, live in filthy places such as drain pipes and decaying animal matter. No one wants creatures of this kind running over the kitchen table, over the dishes in the pantry, or lurking in the dish cloth or corners of the sink. There is no telling what kind of filth may be deposited on the articles with which the body of a roach has come in contact. They invariably leave a disagreeable odor which, once recognized, is easily detected, and they often impart a nauseating flavor to food that they have come in contact with.

1. Roaches, like flies, are filthy.

The best way to insure oneself against cockroaches is to leave the kitchen, pantry, laundry, sink, garbage can, and any other place they are known to frequent, immaculately clean, especially at night. No crumbs, no grease, no soiled dish cloth or towel, should be left around. All food should be carefully covered. However, in spite of one's efforts roaches sometimes appear and some means of getting rid of them must be found. Apartment dwellers, and those living near restaurants, laundries, and other places where these insects find

2. Cleanliness is the best protection against cockroaches.

food and warmth, need to fight roaches rather persistently. Roach powder made of one part plaster of Paris and three or four parts of flour has been used to good effect. It should be sprinkled on shelves, in sinks, under refrigerators, and wherever the roaches are likely to run. A flat dish containing water should be placed near at hand so that the roaches may have easy access to it. The plaster of Paris and water causes the death of the insects. A generous use of borax sprinkled in cracks about the sink, along the baseboards, and wherever the roaches find runways has caused their disappearance.

3. Some ways of getting rid of cockroaches.

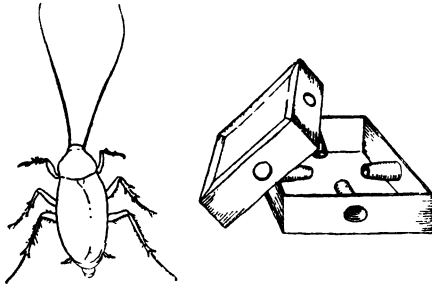


FIG. 223. — Cockroaches may be trapped.

Traps of various kinds have been devised. Deep pans lined with grease attract and trap the insects, for they find it impossible to free themselves from the grease. Boxes provided with cone-shaped tubes fitted into the sides and baited with rancid grease have proved effective (Fig. 223). Trapped roaches may be destroyed by plunging them into boiling water.

Whatever method is used to get rid of roaches must be used persistently and repeatedly, if necessary.

Another household pest and one that we should know how to control is the bedbug. It may not

be so generally known as the others that have been mentioned, but it has been a household pest ever since beds have been in use. Bedbugs do not live in beds only but in the cracks in the walls and floors, under torn bits of wall paper, in the upholstering of furniture, and any place in the infested house where their little flat bodies may be concealed.

VI. Bedbugs and how to get rid of them.

It is an easy matter for bedbugs to be brought into a house. An occasional bug may be brought in on the laundry or in the traveling bag or trunk, after one has been stopping at a hotel or boarding house that has been infested; or they may be carried home on the clothing after contact with crowds in street car or subway. Members of families who travel a great deal should be careful to inspect their baggage and clothing before going home. One stray bug may cause a great disturbance, for a female may lay a batch of forty or fifty eggs which hatch within a week or ten days. If a single bug does accidentally find its way into your bed and you have destroyed it, you should inspect the bed very carefully for several days after to be sure no other bugs are in hiding. Little brown or black spots on the bed clothing should make one suspicious that other bugs are about.

1. Bedbugs may be carried from one place to another.

An old method of getting rid of bedbugs is to force kerosene or gasoline into the cracks and crevices of the bed with a hand syringe or a feather. This

should be repeated every day until the bugs have disappeared. The kerosene will kill the bugs, but will not

2. Some ways of getting rid of bedbugs. destroy the eggs, hence the repetition is necessary in order to get the bugs as soon as the eggs hatch. Various powders found on the market are also frequently used. Washing all parts of the bedstead with boiling hot water will kill the bugs and the eggs, but of course may ruin the finish on the bed.

3. Metal beds and painted walls offer some protection against bugs. When it comes to contending against bugs, metal beds are much easier to care for than wooden beds, because there are not so many cracks and crevices; and painted walls in bedrooms offer less protection to these pests than do paper-covered walls.

Yet another nuisance that housekeepers have to fight is the ant. The habits of ants are interesting to study, but their presence in the sugar bowl and other sweet foods which they seem to enjoy most is most annoying. They are so small that it is possible for them to get into almost any food container, even though it may seem to be well sealed.

VII. Ants sometimes cause trouble. Probably the best method of getting rid of ants is to remove the food that seems to attract them, but this is very difficult, for they like nearly every kind, although they show a preference for sweets.

1. How to get rid of ants. Another method is to place the legs of tables and refrigerators in dishes of water and cover the water

with a film of oil. Or, sponges may be soaked in sweetened water and placed where the ants are most abundant. The ants will crawl into the holes of the sponges and these may then be plunged into boiling water. This process will have to be repeated frequently in order to exterminate the little pests.

If the crack or opening through which the ants enter the house may be discovered, kerosene oil may be squirted into the opening or a solution of corrosive sublimate may be painted over the surface around the opening.

You see a housekeeper has to fight a good many insect pests and she should know how to do it. She should guard against their coming into the house by keeping everything *immaculately clean*. If, however, any of them should enter, she should at once try some method of getting rid of them and should persist until she succeeds.

VIII. Immaculate cleanliness is a good weapon.

Since you have learned of some of the dangers of having insects in the house and know some ways of controlling them, can you not do your share to keep your home free from them ?

SUGGESTIONS FOR STUDY AND REVIEW

1. Many large cities have conducted "Fly Campaigns." Why have these campaigns been considered necessary ?
2. What part can school children take in fighting flies and mosquitoes ?
3. See what you can find out about the relation of flies and typhoid fever during the Spanish War.

4. Why is the common house fly so dangerous ?
5. What can be done to destroy the breeding places of mosquitoes ?
6. Suggest the best way of keeping cockroaches away from the kitchen.
7. What should you do if you found a bedbug in your bedroom ?
8. Write to the Board of Health of your city, or of your state, for literature which will give you information in regard to the habits of household pests and how to exterminate them.

LESSON 34

AVOIDING AND PREVENTING ILLNESS

The schoolgirl's share in doing this is very large. Are you doing your part ?

Nearly everyone feels some responsibility about caring for people when they are sick, but does everyone feel that it is his business to keep well and to help everyone else to keep well ? This is really quite as important as to care for the sick. Schoolgirls and boys may have a large share in promoting public health. Nearly all kinds of disease could be prevented if people were only more careful in their daily living.

When there is illness in the home the case should be reported to the family physician or to some other health authority unless one knows just what the trouble is and what care to give. A family should not try to hide a case of illness for fear of quarantine, because one uncared-for case may be the means of bringing serious conse-

I. All illness should be reported to proper authorities.

quences to others. Good health is such a valuable possession that no one should be careless about the slightest ailment. Attention to a seemingly small matter may prevent a serious illness. If one's throat is only slightly sore or if one has a cold, if there is a breaking out on the body, if the face is very flushed and hot, or if the person has chills and pain, attention should be paid to it. A slightly sore throat or "only a cold" may be the beginning of something more serious. A person who has either should not associate with others, for sore throats and colds are "catching", that is, they may be given by one person to another; and it is not fair to well persons to be associated with those who have any contagious disease, however mild in form. It is just as important to keep well people well, as it is to help sick people get well.

II. Even small ailments may be serious.

Since there is so much known in regard to the cause of disease it should not be so difficult to prevent. If everyone would find out the cause of illness and then try to do what he can to help prevent it, public health would be improved.

III. Many diseases are caused by bacteria and are "catching."

Many diseases, among them colds, sore throat, chickenpox, smallpox, infantile paralysis, and others, are caused by germs or bacteria that get into the body and live there. The germs may be taken into the body in the air we breathe, in the food we eat, in the water we drink, or through cuts, bruises, or other

wounds in the skin. They always come either directly or indirectly from someone who has the disease. Disease germs seem to grow best in places that are dark, damp, and dirty.

When you are older you may learn more about these little organisms. It isn't necessary to think about them a great deal, but it will be of great value to you to form the right kinds of habits of living so that they will not live in your body even if they should get in, and so that you may do your share to prevent the spread of disease of all kinds.

A body that is properly cared for is not a very good place for disease germs to grow. When the Sunnysiders were talking about what they could do to promote the health in their town they decided that one thing they could do was to keep their own bodies strong and well.

The following is a list of the things the girls decided each should do in order to keep her own body in good condition to resist disease.

1. *Eat the right kind of food.* Food plays a great part in keeping the body well. You have learned what the body needs. Do you think you can choose what is best to give it? The food must be clean, properly prepared, and well chewed.

2. *Drink plenty of pure fresh water.* The body needs water in order to do its work well and to help carry off the wastes. It is important that the water be very pure. If there is any

IV. How
to keep
well.

1. Eat
proper food.

2. Drink
plenty of
water.

doubt about the purity of the water it should be boiled. It is not well to put ice into water unless it, too, is known to be clean and free from infection.

3. *Wear proper clothing.* Perhaps you will enjoy reading some of the lessons in Vol. I, Household Arts for Home and School, in order to know what effect clothing has upon the health of the body. The right kind of clothing is just as important as the right kind of food.

3. Wear proper clothing.

4. *Get plenty of sunshine and fresh air.* Sunshine and fresh air are absolutely necessary to good health. Fresh air is just as important at night as during the day. Bad air may be responsible for a weak body just the same as bad food may be. There will not be so many colds and sore throats and pale faces in the families whose houses are flooded with sunshine and fresh air as in those where the fresh air and sunshine cannot enter. Sleep with the windows wide open at night and get out into the sunshine every day.

4. Sunshine and air.

5. *Be sure to keep the body clean both inside and outside.* Cleanliness is a great factor in health. Keeping the skin clean and active helps to carry off the waste of the body. It is even more important to keep the inside of the body free from waste material. The bowels should move every day to carry from the body the material which is of no more use to it, and which if left in the intestinal tract will poison the body and cause illness. There is no more important health habit to form than this.

5. Cleanliness is important.

6. *Get plenty of exercise and work in the open air.* Outdoor exercise or outdoor work helps to keep the body well. Boys and girls who are in school during the day should get outdoors after school hours. They should run and jump and play or do some kind of work that will give the muscles a chance to limber up and become firm and strong.

7. *Get plenty of rest and sleep.* There is nothing that helps more to build up the body and to make one feel well and happy than sufficient rest and sleep. Schoolgirls especially need to be reminded of this. The body needs a chance to relax after work in school and it can do this best in a quiet, dark, well-ventilated room. In order to get the amount of sleep required it is necessary to go to bed early. It is very easy to form the habit of staying up late, but one should not permit herself to do this, for soon she may become cross and irritable. Nine or even ten hours out of the twenty-four should be spent in rest and sleep. Do you get that much?

When possible one should take some rest during



FIG. 224.—Outdoor work helps to keep the body well.

the day. A half hour spent lying down with the eyes closed and the muscles relaxed rests one very much and makes her able to accomplish much more than she would otherwise be able to do.

8. *Be sure to play every day.* "All work and no play"

makes Jill a dull girl as well as Jack a dull boy. It is best

8. Rec-
reation
and play.

to do one's playing out of doors where there is sunshine and fresh air and where the entire body may get the benefit. Walking, rowing, skating, a game of tennis, or golf are good forms of play when the weather permits. Stuffy theaters and moving picture places where the air is apt to be bad are not so good for one's health as a game of tennis or a walk in the woods. It is well to keep indoor



FIG. 225.—A good form of exercise.

pleasures for those days when one cannot get out.

Another thing the Sunnysiders felt they could do to promote the health of the community was to take precautions against infection and against spreading disease. They listed some of the things they thought were worth while to remember ; among them were the following :

V. Pre-
cautions
against in-
fection and
spreading
disease.

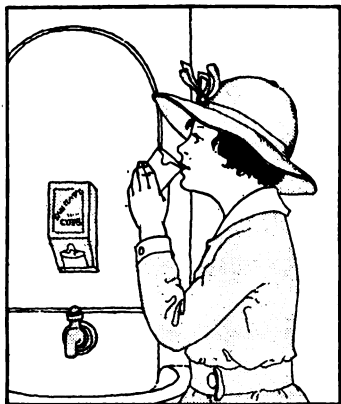


FIG. 226.—The use of the individual drinking cup helps to prevent disease.

1. Use individual towels, combs, brushes, and clothing.
2. Use individual drinking cups.
3. Do not put fingers or hands to the mouth or face.
4. Do not put money, pencils, pins, or anything else but food and drink into the mouth.

5. Use a handkerchief to cover a sneeze or cough.

6. Do not carry a handkerchief in the hand or leave it lying about. Put it where it will not be seen.

7. Use gauze or cloths that may be burned when you have a cold ; then burn them after use.

8. Never kiss *anyone* on the mouth.

9. Never spit on the floor of any building, or on the sidewalk.

10. Avoid crowds of all kinds when there is an epidemic.

11. Isolate yourself when you are sick.

12. Disinfect all dishes, clothing, and other things



FIG. 227.—Use a handkerchief to cover a sneeze or cough.

which have been used by a person who has had a contagious disease.

Miss Ashley and the girls talked about each suggestion made. The girls had studied about some of these things in their hygiene class, but each one saw a new reason for paying attention to them when they realized that their own health and the health of others depended upon the way each individual did her part.

Read each of the suggestions again and see if you know the reason for including it. If you do not understand why it is necessary to do these things, will you not ask your teacher to tell you? She will be glad to help you.

SUGGESTIONS FOR STUDY AND REVIEW

1. Why is it as important to keep well people well as to care for the sick?
2. Why is it necessary to report illness to the health authorities?
3. What is meant by saying a disease is "catching"?
4. Why should a person who has a cold stay away from others?
5. What should you do to keep your body well?
6. Suggest several ways by which diseases may be spread.
7. What precautions can you take against becoming infected?
8. What can you do to help others keep well?

LESSON 35

ILLNESS IN THE HOME

How a schoolgirl may help to care for one who is ill at home.

In spite of all the precautions one may take, there is often illness in the home. When one is seriously ill it is well to go to a hospital or to have a trained nurse come in to care for the patient. But this is not always possible. A young girl should not be expected to nurse a very sick person, but she should be able to help do many things in the home, as sickness usually means much extra work. In case the person is not very ill and requires only a little care and attention, a girl of school age should be able to do much to make the patient comfortable.

Miss Ashley and her class suggested many ways of helping at home during illness. Some of the girls were frequently called on to do things at home which they felt they would know how to do much better after they talked about them and did them at school.

Of course the sick room in the home should be very clean, quiet, and cheerful. If possible the sun should shine into it sometime during the day. It should not contain any unnecessary furniture, and that which is used should be of a kind that is easily cleaned. Upholstered chairs, heavy curtains, and carpet should be removed since they are difficult to keep clean.

I. The sick room and its furnishings.

It is easier to care for a person if a single bed is

used. White enameled iron beds are easy to keep clean and to move. The springs should not sag, the mattress should be level, and all of the clothing should be made of washable material. The pillowcases and sheets should be changed often enough to keep the bed fresh and clean. There is nothing so restful as a fresh, well-made bed.

II. The bed and its care.

Do you think you could give the necessary daily care to a sick room? It should be kept very clean. There is always more or less "fluff" that collects under the bed which you may wipe up with a slightly dampened cloth or with a broom covered with a cloth. The dust on the furniture may be removed with a damp cloth. Refuse of all kinds, soiled dishes, soiled clothing, and faded flowers should not be allowed to accumulate. Fresh water should be given to flowers that remain in the room, but no flowers should be left in the room at night.

III. Some things that you may do.

1. Caring for the room.

If the patient is able to sit up, perhaps you may make up the bed, or if not, possibly the pillows will be more comfortable if you should shake them up a bit.

The air in the bedroom should be kept very fresh. A window should remain open, but the patient must be protected from all drafts. You know from previous lessons how to accomplish this.

If the patient is not very ill, maybe you can wash her face and hands or brush her hair.

If you at some time are left in charge of giving medicines, be sure to read the directions on the outside of the bottle. A good rule to follow is this: *Read directions three times before giving any medicine.* When medicine is left in your charge, be sure that you know just what it looks like, just when to give it and how much, and how it is to be given. It is very important to remember these things.

After giving the medicine, wash the spoon or glass and your hands, too. Do not leave any medicine where the patient can see or reach it.

There are many ways in which you can help to make a sick person com-

fortable. If there are children in the house you can amuse and entertain them to keep them quiet. It is well to keep them outdoors if possible so that there will be no unnecessary noise. Should you take them into the sick room be sure that their hands and faces are washed and that their clothes are fresh and clean. If it is your mother who is ill, she will appreciate the care you give to your younger brothers or sisters.

If things go wrong in other parts of the house, it is

**2. Caring
for the
patient.**

**a. Giving
medicine.**



FIG. 228. — Be sure to read the directions on the medicine bottle.

**3. Other
ways of
helping.**

wise not to tell the one who is sick. Think of something cheerful to talk about if you talk at all.

Do not ask a sick person too often how she feels. Just show your interest by doing something nice for her without saying much.



FIG. 229. — Maybe you would like to prepare a tray for some one who is not feeling well.

There is one thing that you can do and no doubt will enjoy doing, — preparing an attractive tray to carry to a person who is not well enough to come to the table. Of course, if the person is very ill, the doctor must tell you what to prepare, but there are many times when a person who does not “feel like eating” will be tempted to eat if some easily digested food, daintily prepared, is served.

IV. Preparing and serving food for the sick.

The tray should be made attractive with a clean cloth or doilies, and dishes that look well together. Nicked or cracked dishes should not be used if there are others to be had. Try

1. Things to remember in preparing the tray.

to think of all of the utensils that are needed to eat what is served so that the person will not have to ask for anything. Butter, sugar, and salt should not be forgotten if they are to be used, and a glass of cold water is nearly always desired. On the other hand, do not carry any unnecessary things. Try to keep hot food hot by having the dishes warmed and the food covered. It is just as important to serve cold food cold. Be careful not to spill anything.

The Sunnysiders prepared several trays suited to persons requiring certain kinds of diet. One group of girls prepared what Miss Ashley called *liquid diet*. 2. Liquid diet. Liquid diet consists entirely of liquid food such as milk, buttermilk, eggnog, cocoa, chicken broth, beef tea, orange juice, gruels. Sometimes a sick person gets nothing but liquid diet for many days in succession. In order to get enough food the patient may be fed every two hours during the day. In all probability you will not have to be responsible for feeding persons who are so ill, but you may be asked at some time to prepare food of this kind. And then, too, people who are not very sick enjoy liquid nourishment at times. Maybe you can prepare an eggnog, a cup of cocoa, or a dish of cream soup or beef broth for your mother some day when she is not feeling very well; or maybe you may cook some oatmeal gruel for one who must have her food in that form. Miss Ashley gave the class these recipes.

EGGNOG

1 egg	$\frac{1}{2}$ teaspoonful vanilla
1 teaspoonful sugar	A few grains of salt
$\frac{2}{3}$ cup milk	A grating of nutmeg (if liked)

Beat the egg until it is light; add the sugar, salt, and then the milk gradually; stir in the vanilla, mix well. Strain into a glass and grate a little nutmeg on top. Serve at once.

HOT LEMONADE

1 lemon	2 tablespoonfuls sugar
	$\frac{2}{3}$ cup boiling water

Wash and wipe the lemon. Cut a thin slice from the middle and squeeze the rest into a bowl. Put in the sugar, pour on the boiling water and strain into a cup. Serve with the slice of lemon on top.

PLAIN OATMEAL GRUEL

(1) 2 tablespoonfuls oatmeal	$\frac{1}{2}$ teaspoonful sugar
A few grains of salt	1 cup boiling water
	1 cup milk

Stir the oatmeal, sugar, and salt into the boiling water and cook in a saucepan for forty minutes, or in a double boiler for two hours. When cooked strain through a fine wire strainer to remove all the hulls. Add the milk and heat to the boiling point. Serve it hot.

(2) Gruel may be made by adding hot water and milk to any well-cooked cereal and then straining it.

BEEF JUICE

Broil a piece of round steak from which all the fat has been removed until it is medium well done. It is just right when the

steak is puffed up and the inside is pink and juicy. Cut the meat into small pieces and squeeze the juice out with a meat press or a lemon squeezer. Add a little salt and serve the juice in a dainty cup. If it is necessary to warm it, place the cup in a dish of very hot water. Do not boil it.

Another group of girls prepared trays on which were placed meals for a person requiring *light diet*. Light

3. Light diet. diet is used when a person is not very well or when one who has been very ill begins to improve. It includes easily digested foods such as toast, well-cooked cereals, soft-cooked eggs, custards, soups, gelatin jellies, tender beef, mutton, and chicken.

Toast is one kind of food that every girl should know how to prepare very well, for nearly everyone likes toast and it may be served in many ways and with many different kinds of foods. Toasted bread is more easily digested than plain bread for in the **a. Making toast.** browning process part of the starch in the bread is changed to something that is even easier to digest than well-cooked starch. But it must be well made. Toast that is clammy on the inside and blackened on the outside is not appetizing nor wholesome. When making toast for one whose appetite needs coaxing, the crust may be removed from the bread and the slices may be cut into triangles or long, thin pieces to make them dainty. Butter-soaked toast is not so easy to digest as that on which the butter has not melted.

TO MAKE DRY TOAST

Use bread at least one day old. Cut the bread into one third inch slices; place the slices in a toaster or in a wire broiler and dry them slowly either in a moderate oven or by holding some distance from the fire. After this has been accomplished place the broiler nearer the heat and toast the slices a golden brown on both sides. Serve at once. Well-made toast is crisp and golden throughout.

MILK TOAST

2 slices of toast	1 cup hot milk
2 teaspoonfuls of butter	$\frac{1}{2}$ teaspoonful salt

Arrange the pieces of well-made toast in a hot dish and pour over them the hot milk to which the butter and salt have been added.

You already know how to prepare cereals, eggs, soups, and some kinds of meats. In preparing any food for a sick person try to do it even more carefully than when it is to be served to others. The dainty appearance of food is a very important factor and often makes one willing to eat who otherwise might not be able to do so.

b. Preparing other foods.

Do not feel badly if the food you have served is not eaten. Sick people have whimsical tastes and well people must be patient with them.

When persons who have been very sick are nearly well and want to gain strength and weight they are usually given any food that they desire except fried foods and foods that are difficult to digest. They may want to eat too much and one must be careful that only the proper amounts

4. Convalescent diet.

of food are given at any one time. It is usually wise to give nourishing drinks or very light lunches in between the regular meals. Some suggestions for meals for a day for a convalescent are given below. Do you think you could prepare each of the meals if you were called upon to do so?

HALF HOUR BEFORE BREAKFAST

Orange Juice or Other Fruit Juice

BREAKFAST

Oatmeal
Toast

Milk to drink

Thin Cream
Bacon

LIGHT LUNCH, MIDDLE OF THE MORNING

Eggnog and Graham Crackers or
Cup of Broth and Toast

DINNER

Baked Potato

Broiled Lamb Chop

Bread

Spinach
Butter

Jelly

Baked Apple

LIGHT LUNCH, MIDDLE OF THE AFTERNOON

Glass of Milk, or Dish of Ice Cream or
Cup Custard, or Junket

SUPPER

Cream Soup
Stewed Prunes

Toast
Plain Cup Cake

SUGGESTIONS FOR STUDY AND REVIEW

1. Describe a room suitable for a sick person.
2. What daily care should it have ?
3. How may the patient be protected from drafts without closing the windows ?
4. What care should be taken in giving medicines ?
5. Write a list of things you can do to help when there is illness in your home.
6. What care should be taken in preparing and serving food for one who is ill ?
7. How should toast be made ? Why ?
8. Write several menus containing easily digested foods. Ask your teacher to criticize them.

LESSON 36

SPENDING THE TWENTY-FOUR HOURS

How do you spend your time ?

Be sure to plan for pleasure and play. Picnics and other good times are so important that they, too, are worth studying about in school. This lesson tells you about some good times the Sunnysiders enjoyed.

Play and pleasure have just as much to do with keeping us well and happy as the food that we eat and the clothes that we wear. It is just as important to plan for our pleasures as it is to plan for our meals and our clothes. If we do not eat the right kind of food or wear the right kind of clothes, our bodies will not be kept in good condition ; and if we do not get enough of the right kind of pleasure, our minds and bodies suffer because of it. Of course much of our

**I. Play
and
pleasure
are
important
factors in
keeping us
well and
happy.**

work gives us pleasure, but no one wants to do the same thing all the time even if it is enjoyable ; the body and mind need a change.

How do the members of your family plan to have good times, or do they not plan any? There are so many ways for members of a family to enjoy things together that every home maker should do her part to plan for this necessary phase of life.

When the home maker wants to be sure of spending money wisely she makes a budget, or plan for spending and saving. By doing so she knows just

**II. Make
a plan
for spend-
ing time.**

how much money she may use for various purposes, and she plans to spend accordingly. A really good home maker "budgets" or makes a plan for spending her time too, and she should set apart a portion of the day for play and pleasure as well as for work. Different people have different amounts of money, some have much more than others, but all people have the same amount of time, *twenty-four hours* each day, — no more, no less, — the same amount year in and year out. Have you ever noticed how people spend it? Some people know how to get the full value of a dollar, and we say they are thrifty, — they have learned how to get the best for their money. We admire people who know how to use money wisely and usually think of them as successful. The person who spends money wisely usually has a bank account which may be drawn on in case of emergency and to give others pleasure ; the person who spends his time

wisely stores up something within himself and has something, too, to share with others.

It is very important for every housekeeper to know just what there is to be done on certain days and just how long it will take her to do each piece of work, so she will be sure to plan for rest and play each day. It is just as important for schoolgirls to know how to spend their time so it will be filled with those things which are most worth while.

What are some of the things for which we should plan to spend the twenty-four hours? When Miss Ashley asked the Sunnysiders this question, each girl tried to put down the way she spent the day, but no one remembered just what she did nor how long it took to do the things she did remember. So the class decided that every day for the period of one week each girl would write down just what she did with her time and bring the results to class to find out whether she was a wise spender or not. What fun the girls had comparing notes! "Some of the things I do, do not look very well when they are written down on paper," confided Natalie to Dorothy as they walked to school. "Father said he changed his way of spending money after he began to keep an account of it, and he said he thought I might change my way of spending time after I saw some things in black and white."

III. How shall the time be spent?

After the results of the week's time-spending were given in class the girls made a "time budget" or "a

plan for spending twenty-four hours" which they thought should be a guide to girls in the seventh or eighth grades. Of course they knew that no two girls would spend their time in just exactly the same way, but the budget was to help them get in those things that should not be forgotten and which are so apt to be left undone

1. A "time budget" helps one to spend wisely.

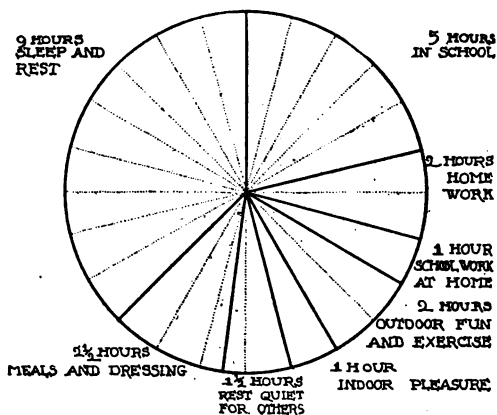


FIG. 230. — This is the "time budget" that the Sunnysiders made. What do you think of it?

unless one has a reminder or has gotten into the habit of doing them. Notice the plan and see which items you think are the most important (Fig. 230). The girls decided that at least nine hours should be spent in sleep and rest at night, and that another hour, or even more, should be used for rest or quiet during the day. If one does not care to sleep maybe she will enjoy reading, writing, or thinking quietly by herself. Five hours were set aside for work in school; two for helping with the work at home; and one for doing school work at home. This gives the schoolgirl an eight-hour work day which if she is not hurried and the work is not too heavy should

be about right. Every girl should spend at least two hours in outdoor fun and exercise. Activity of some kind, — active games, skating, swimming, hiking, rowing, tennis, develop the body and the mind and make the girl better able to do well other things that are required of her. The plan also gives her one hour or more for indoor pleasure of some kind. There are a variety of indoor amusements and entertainments. Visiting with the other members of the family, playing games, reading aloud, or telling stories gives pleasure and rest as well. Two and one half hours were allowed for meals and dressing. At first that may seem more time than is necessary, but is it? Getting ready for the day, — bathing, dressing, combing the hair, caring for the hands and nails, require care and time, and a dainty girl will plan to have time to groom herself well. It not only makes her respect herself, but others think well of her because of her pleasing personal appearance. Meals should not be eaten hurriedly and would not be if they were served on time and members of the family were prompt. You see how necessary it is that the entire family work together when planning to spend the time so that none will be wasted. Do you know how you spend your time? Are you sure you set aside enough time for those things that are most worth while?

While the girls were working on the plan they recalled what Miss Ashley had told them about Mrs. Richards, — how she always had time to do things

for her friends and others who were made happier through her thoughtfulness. She could give pleasure, — and get it in the giving, — because she knew how to spend her time wisely and because of her interest in others.

2. Wise planning gives time for doing something for others.

The girls were very much surprised when Miss Ashley said she was more interested in the time set aside for pleasure than in any other item in the plan.

She said that it was more and more necessary, as the number of working hours was being decreased, for everyone to make plans for using the extra time to best advantage. The way people spend the hours when not at work makes a greater difference in their characters than the type of work they are doing. Every kind of work that needs to be done is honorable and time spent at work is usually planned for. It is just as important to plan how to spend the time when not at work so that it will be filled with those things that give pleasure and happiness not only for the time being but later when one remembers them.

3. Plan for play and pleasure.

There are so many ways of spending leisure time that unless care is taken one may be badly cheated just as in the careless spending of money. The people of Commonwealth City find many ways of enjoying their leisure. There are libraries, museums, and parks which may be used by all, for they are owned by all. Boys and girls as well as their fathers and mothers read and study in the libra-

iv. Spending leisure time to advantage.

ries; they learn to know and enjoy good pictures and other forms of art in the museum, and become acquainted with the birds, animals, and trees and flowers in the parks. In the summer time there are band concerts and community singing to give pleasure. Everyone seems interested in doing something to make Commonwealth City a desirable and attractive city to live in. You, too, no doubt, have libraries, museums, and parks in your city. Do you use them? They were built for your benefit and will become better and bigger the more they are used.

A form of pleasure that Miss Ashley and her class enjoyed together was picnicking. Picnics are good fun at any time of the year when the weather permits. There were very few places within walking distance of Commonwealth City that the Sunnysiders had not frequented. They had their favorite places for different seasons of the year and enjoyed visiting them again and again. They wore clothing suited to walking and climbing; bloomers, middy blouses, and low-heeled shoes gave them freedom and comfort. They learned to prepare and pack picnic lunches in class. Instead of taking a great variety of all kinds of food as is so often done by picnickers, the girls agreed on suitable menus of a few simple foods. Sandwiches and fruit appeared at every picnic. The sandwiches were wrapped in waxed paper to keep them fresh and clean. Miss Ashley thought

1. The use of libraries, parks, and museums.

2. Picnics are good fun.

a. Suitable clothing should be worn.

b. Food should be wholesome and kept clean.

that illness after picnics was often due to the great variety of foods that were eaten, and to the flies and other insects that came in contact with the food. For this reason the girls preferred a few simple, wholesome foods and protected them against dust and flies. The sanitary handling of food is just as important at a picnic as at home.

Juicy fruits were taken, for it was not always possible to get good water. The girls learned that it is not safe to drink water from springs or streams, or even wells, the purity of which is not known.

*c. Be sure
the water
is pure.*

Water that looks clean and sparkling may be a carrier of disease germs. Some of the girls carried water from home in thermos bottles or in canteens such as the Boy Scouts carry.

The picnic lunches the girls liked best were those which were cooked over a camp fire. Every girl knew

*d. Cooking
over a
camp fire.*

how to build a fire and how to broil bacon and make toast at the end of a stick. Sometimes they carried a rack (Fig. 231) to support a pan or a kettle and cooked potatoes, eggs, green corn, or anything else that did not take too long, for they were too hungry to wait! Sometimes chops, steaks, or slices of ham were placed on the rack and broiled. How good they smelled and how delicious they were!

On one occasion the girls washed medium-sized potatoes and wrapped them in several thicknesses of wet newspaper and placed them under the hot coals of the

fire to bake. How mealy and fine they were an hour later! The steam from the wet paper helped to cook them and the paper kept the potatoes from becoming charred. Again, they stripped back the husks from ears of sweet corn, removed the silks, dipped the ears into water, and put the husks back into place, fastening them securely, and placed the corn under the hot



FIG. 231. — Hot cocoa, toast, and bacon will taste good.

coals to steam. Can you not imagine the girls eating hot, juicy corn on the cob a little later!

The girls enjoyed cooking different foods from time to time and not one of them cared to go back to the old type of picnic lunch that included several kinds of cake and pie, salads and pickles and jellies and jam which required too much time to prepare and were not half so good anyway.

Of course other groups as well as the Sunnysiders used the picnic places near Commonwealth City so the

girls had to be careful about picking up all papers, boxes, bottles, tin cans, fruit skins, eggshells, and other refuse. Pretty places soon lose their attractiveness unless everyone does his part to keep them clean. Whenever a fire was built, the refuse could be burned. Of course it was necessary to see that every spark of fire was put out before leaving.

c. Leave the picnic spot clean.

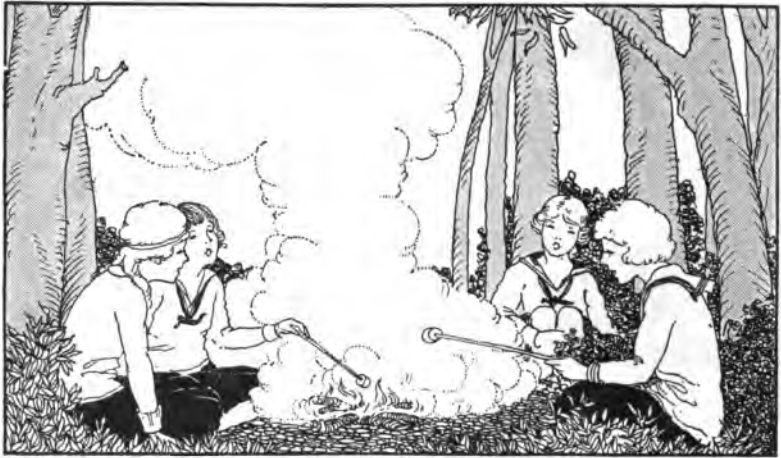


FIG. 232. — An hour around the camp fire.

Serious fires are often the result of carelessness on the part of picnickers or campers.

The part of the picnic that the girls liked best was the hour spent around the camp fire, just before going home. They toasted marshmallows, told stories, sang songs, and enjoyed themselves so much that Dorothy declared "A picnic is never long enough."

f. Around the camp fire.

SUGGESTIONS FOR STUDY AND REVIEW

1. Study the girls' plan for spending the day. What do you include that is not in this plan ?
2. Why is it necessary to plan for pleasure ?
3. What things do the members of your family enjoy together ?
4. How does your city provide for the enjoyment of leisure time ? List the things that you can enjoy without the spending of much money.
5. Why should one be careful about the food eaten at picnics ?
6. In what way may water be contaminated ?
7. What good times are you planning for this summer ?

ADDENDA

Some Helps in Studying Your Household Arts Lessons

In one end of the home-making room in the Ellen H. Richards School was a large case with shelves and drawers. In it Miss Ashley and the girls placed books, magazines, and illustrative material which they found helpful in studying their household arts lessons. Occasionally when the girls finished their regular work before the close of the class period they were permitted to read any article or book of interest. Miss Ashley frequently referred to certain volumes and often assigned certain chapters for study. After seeing the books in their laboratory the girls felt better acquainted with them and knew what to ask for in the library.

In the drawers of the case all kinds of interesting charts and pictures were kept. Miss Ashley brought these out on various occasions. They invariably helped the girls better to understand the topics they were studying. Sometimes the members of the classes brought pictures or post cards which were of interest and value, and these, too, were filed.

Would you be interested to know what books were on the shelves? Here is a list.¹ Maybe you will enjoy reading some of them in connection with your work.

¹ Write to publishers for price list.

- The Home and the Family — Kinne & Cooley; Macmillan, 1916.
Food and Health — Kinne & Cooley; Macmillan, 1916.
Clothing and Health — Kinne & Cooley; Macmillan, 1916.
Home Life in Colonial Days — Earle; Macmillan, 1913.
Elements of the Theory and Practice of Cookery — Williams & Fisher; Macmillan, 1916.
Everyday Foods in War Time — Rose; Macmillan, 1918.
Feeding the Family — Rose; Macmillan, 1916.
Food and Household Management — Kinne & Cooley; Macmillan, 1914.
Shelter and Clothing — Kinne & Cooley; Macmillan, 1914.
Laundering — Balderston; Published by author, 1224 Cherry St., Philadelphia, 1914.
Food Study — Wellman; Little, Brown, 1917.
How we are Fed — Chamberlain; Macmillan, 1906.
How We are Clothed — Chamberlain; Macmillan, 1906.
Food Industries — Vulté & Vanderbilt; Chemical Publishing Co., Easton, Pennsylvania, 1916.
How the World is Fed — Carpenter; American Book, 1907.
How the World is Clothed — Carpenter; American Book, 1907.
An Introduction to Science — Clark; American Book, 1915.
Food Problems — Farmer & Huntington; Ginn.
The Story of the Cotton Plant — Wilkinson; Appleton, 1915.
Linen, How It Grows — National Flax Fiber Company.
From Wool to Cloth — Shaw; American Woolen Company.
Mary Frances Cook Book — Fryer; Winston, Philadelphia.
Mary Frances Sewing Book — Fryer; Winston, Philadelphia.
Mary Frances Housekeeper — Fryer; Winston, Philadelphia.
When Mother Lets Us Help — Johnson; Moffat, 1909.
When Mother Lets Us Cook — Johnson; Moffat, 1908.
When Mother Lets Us Make Candy — Moffat, 1915.
When Mother Lets Us Give a Party — Yale; Moffat, 1909.

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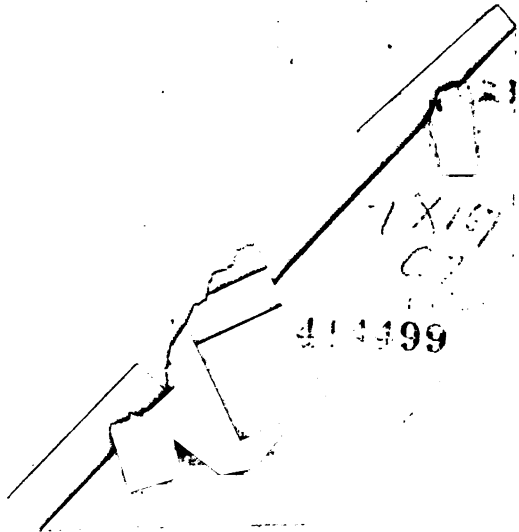
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