

Domestic Science Club Demonstrations.

by

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"Blood and muscle, bone and tendon, brain and nerve - all the organs and tissues of the body - are built from the nutritive ingredients of food. With every motion of the body and with the exercise of feeling and thought as well, material is consumed and must be resupplied by food."

Food has been described as those substances which taken into the body may be used to build tissue, repair waste and furnish any form of energy.

In preparing foods in this short course of Domestic Science, it shall be the object to prepare them in the best possible way. The senses of taste and sight should always be appealed to. The thought of eating palatable food will stimulate the flow of the digestive juices and the food will be more easily digested. The old saying that the "mouth waters", expresses a truth that none can afford to overlook. The wholesomeness, digestibility and nutritive value of food are also important points to be considered in the preparation of foods.

The first foods prepared will be the so-called carbohydrates, which contain carbon, hydrogen, and oxygen. The two latter elements being in proportion to form water. Non-nitrogenous foods. The functions in the body of these foods are to furnish heat and energy.

The first lesson will be the preparation of potatoes, which others besides the Irishman can not very well do without.

While the vegetables are prepared the recipes will be given (Note:- Two potatoes will be prepared for baking and three to be boiled.)

Baked Potato.

1 medium sized potato. Scrub thoroughly in water with a brush. Pare a thin strip around lengthwise to let out some of the

moisture. Place on pan in very hot oven. Bake 40 to 60 minutes. When done roll in clean napkin until skin is broken. Serve immediately.

Stuffed Potatoes.

1 medium sized potato. 1 tsp. butter.
1 tsp. milk or cream 1/8 tsp. salt.

Bake potato according to directions for baked potato. On removing from oven, cut in halves lengthwise. Scoop out the inside. Season and force through a ricer. Pile lightly into skins. Put on baking sheet and return to oven. Bake until delicately brown.

Boiled Potato.

1 potato.
Boiling water to cover.
1/4 tsp. salt to every cup of water.

Wash, pare, remove eyes and rinse potato in cold water. Place in salted boiling water and cook 20 to 30 minutes, according to size of potato. As soon as done drain off water. Remove cover. Shake over heat till dry, and serve.

Riced Potato.

1 potato.
Boiling water to cover
1/4 tsp. salt to 1 cup of water.

Boil potato according to directions. Force through ricer to hot serving dish.

Mashed Potato.

Hot riced potato.
1 tsp. butter
1 tsp. cream or milk.
salt to taste.

Add butter, cream, salt, to potato. Beat with silver fork till light and creamy. Put in hot dish and serve immediately.

The potato is a native of South America, where it still grows wild. It was introduced into European countries by explorers and was later introduced into the United States - about three hundred years ago.

The object in cooking potatoes and other vegetables is to soften the cellulose as well as swell and burst the starch grains. The potato is made up principally of microscopic granules of starch, each granule being surrounded by a coating of cellulose. When cooked, the cellulose is broken letting free the starch. There are also present in the potato a small amount of proteid and mineral matter which are found directly under the skin. For this reason when peeling the potato one should be very careful to remove no more than the skin. The potato should never be allowed to stand in cold water but should be cooked immediately after being peeled. If allowed to stand in water some of the mineral matter, proteid and starch will dissolve out and therefore a part of the potato will be lost.

When a potato is baked all the nutritious portion is retained, and on account of the very high temperature at which it is baked, 400°F., a part of the starch is converted to dextrin, which is easily changed to a sugar that may be readily assimilated by the system.

When a potato is steamed all the constituents are retained. When boiled, part of the proteid, mineral matter and starch are lost. Because of the low temperature at which the potato is boiled, 212°F., no dextrin is formed but just soluble starch, which makes it less easy to digest. If the potato is large, it

should be cut into halves before it is boiled, or the outside will become pulverized before the inside is tender.

(While giving previous remarks the boiled potatoes may be removed, then two of them riced and one-half of the riced potatoes mashed. When that is done, one of the baked potatoes may be broken and the other one stuffed. All may be served at once in hot dishes.)

Utensils and dishes required for lesson.

- 1 enamel plate for soiled utensils.
- 1 enamel plate for potato parings.
- 1 measuring cup.
- 1 pan for washing potatoes
- 1 kettle for boiling potatoes.
- 1 paring knife.
- 2 spatulas to use in measuring
- 6 teaspoons for measuring
- 1 table spoon
- 1 ricer
- 1 silver fork
- 1 finger bowl
- 5 dishes for serving
- 1 tray and doily
- 1 clean napkin
- forks to be used when food is served.

Ingredients used.

- 5 potatoes
- 2 teaspoons butter
- 1 teaspoon salt
- 2 teaspoons cream

Second Demonstration.

Potatoes continued.

(At the beginning of lesson the water is put on to cook the potatoes for the potato roses and Parisian potatoes.) At the same time the lard is put on to heat for the Saratoga chips and quirls. The potatoes are prepared for cooking as the recipes are given.)

Saratoga Chips.

Wash and pare potatoes and cut into thin slices, the thinner the better. Put to soak in strong salt water. Let stand at least one-half hour. Take out and dry between folds of cloth and fry in deep fat. Put in just a few chips at a time. Too many will cool the fat. When the fat is hot enough to brown a chip in 1 minute it is sufficiently hot.

Parisian Potatoes.

With French cutter (round vegetable spoon) cut out of uncooked potatoes, pared, a half pint of balls. Cook in boiling salted water about ten minutes, or until nearly tender; drain and toss in a frying pan, in which there are two tablespoonfuls of melted butter and a little salt. Set the pan in the oven, shaking it frequently, until the potatoes are thoroughly cooked and well browned. Add a little fresh butter, a dash of salt, if needed, and a tablespoon of chopped parsley. Toss the balls about, to distribute the ingredients evenly, and serve at once. When cutting the potato, lay cutter flat on surface then press in and twist cutter around.

When the balls are cold, they may be made into a salad if desired.

Any vegetable may be cut with the vegetable spoon or cutter.

The balls are nice with white sauce.

Potato Roses.

Boil a potato and mash it according to directions given for mashed potato. Fill the forcing bag or pastry bag, as it is often called, with the mashed potato (either white or sweet). Hold the bag in an upright position, tube pointing downward, and force out the potato; at the proper moment press the tube gently into the mixture and raise it quickly, to break the flow. Shape the roses on a buttered tin sheet, brush over with beaten egg, diluted with milk or water, and brown in the oven. Remove with a spatula or broad-bladed knife, and use as a garnish for meat or fish. When used as a border for a creamed dish, set closely together on the serving dish, to avoid removal. Potato roses may be served in place of potatoes.

(At this time the potato for the roses and the balls may be added to boiling water.)

Potato Quirl.

Wash and pare potato. Cut the quirls with a potato quirler. Fry in deep fat. The quirls may be used for garnishing meat. Parsley may be run down the center of each quirl. Quirls may be served in place of potatoes.

(At this time the potato chips and quirls may be fried, then the Parisian potatoes prepared and then the potato roses.)

The digestion of the starch of the potato, of which this tuber is mostly composed, is commenced in the mouth. The ptyalin of the saliva acts upon the starch changing it into soluble substances - some dextrin and maltose are formed. In order that this chemical change may take place, it is necessary that starchy foods be thoroughly masticated so that the saliva may be well

mixed with them. The ptyalin acts best in neutral or slightly acid media. For this reason potato salad is hard to digest. The particles of potato, being surrounded by the acid, can not be acted upon by the ptyalin in the mouth. Potatoes fried in deep fat are not so digestible as when prepared in other ways. For the potato is surrounded by the fat which hinders its digestion in the mouth. If fried in deep fat, the fat should be very hot so it will not soak into the potato.

In the small intestine the digestion of starch is completed. The maltose, a complex sugar, with the addition of water, is inverted into dextrose and levulose, two simple sugars and then absorbed. When chips, croquettes, etc. are fried in deep fat, as soon as they are done they should be laid on crumpled absorbent paper so as much of the grease as possible may be absorbed.

Yams and sweet potatoes have about the same chemical composition and are equal in nutritive value to Irish potatoes.

(The above remarks may be given while cooking the potatoes.)

Utensils and dishes used.

- 1 pan for washing potatoes
- 1 vegetable brush
- 1 paring knife
- 1 pan containing salt water for chips
- 2 clean dry cloths
- 1 kettle for lard
- 1 wire basket
- 1 French cutter
- 1 blue plate
- 1 measuring cup

1 kettle for boiling potatoes
1 frying pan
1 silver fork
1 pastry bag
1 pastry tube
2 spatulas
1 potato quirler
1 finger bowl
1 platter for quirls
3 plates
1 tray with napkin
forks used in serving.

Ingredients.

4 potatoes
lard
salt
4 tbspn. butter
1 egg
1 tsp. cream
1 tbspn. chopped parsley
2 pieces of parsley

Third Demonstration.

Carbohydrates - continued.

(It will be necessary to have some boiling water accessible at time of the beginning of lesson. The turnips and macaroni will be prepared and put on to cook while their respective recipes are given.)

Creamed Turnips.

1/2 c. white sauce

1/2 c. turnip

Wash and peel turnip. Cut into 1/2 inch dice. Cook until tender, in boiling salted water. Drain water from turnip. Add white sauce and serve.

Scalloped Macaroni and Cheese.

2 tbspn. grated cheese.

2 tbspn. macaroni

1-1/2 c. boiling water

1/8 tsp. salt

1/2 c. white sauce

6 tbspn. buttered crumbs

Break macaroni and wash thoroughly. Place water in upper portion of double boiler. Add 1/8 tsp. salt and when boiling rapidly add macaroni. Boil five minutes over direct heat. Then place upper in lower portion of double boiler and cook one hour. Drain. Cut macaroni into 1/3 inch pieces. Fill two buttered baking dishes with alternate layers of sauce and macaroni and grated cheese, and cover with buttered crumbs. Bake until the sauce bubbles.

Macaroni has a better color when steamed but when it is necessary to cook it in a short space of time, as it is for this lesson the water should be boiling hard when macaroni is added and should be kept at a high temperature. If the water keeps boiling the macaroni will be kept in motion and therefore will not stick to the bottom of the kettle.

White Sauce No. 1.

White Sauces No's. 2 and 3 will be given in other

Demonstrations. I will double this recipe so I will have enough for the creamed turnips and the macaroni.

- 1/2 c. milk
- 1/2 to 2 tbspn. flour
- 1/2 to 2 tbspn. butter
- 1/16 tsp. salt.

Mix flour and salt with an equal quantity of cold milk to smoothness. Scald remainder of milk in double boiler. Add milk and flour mixture to hot milk. Cook 30 minutes till thick. Remove from heat and stir in butter. This is the most easily digested method of making white sauce, as the starch of the flour is thoroughly cooked and the butter, being added last, does not have a chance to become thoroughly mixed with the starch granules and thus hinder their digestion in the mouth.

Buttered Crumbs.

- 6 tbsp. bread crumbs.
 - 2 tbsp. butter
- Melt butter and stir in crumbs.

(The white sauce may be made while the recipe is being given. The buttered crumbs may be measured while recipe is given) (One half of white sauce may be added to turnips as soon as they are done and the other half used with the macaroni and cheese.) (The following remarks may be given while the turnips and macaroni are cooking and during the latter preparations of the foods.)

A turnip is a vegetable according to the generally accepted definition, namely; "A vegetable is such a plant as is cultivated for culinary purposes."

The vegetables comprise various parts of the plants. Thus vegetables may be classified into ten groups:-

Seeds - as - peas and beans
Roots - turnips
Bulbs - onions
Tuber - potato
Shoot - asparagus
Stalks - celery, rhubarb
Leaves - cabbage, lettuce
Flowers - cauliflower
Fruit - cucumber, tomato
Fungi - mushroom.

A turnip is a root containing about 90 % water, 5% carbohydrates, and a small amount of proteids, mineral matter and fat. The turnip contains more water than some fruits and fluids. Milk, a fluid, contains about 2% less water than a turnip - a solid. So much water being present the turnip does not contain as great a nutritive value as is generally supposed.

Macaroni is made from a special wheat raised in the tropics, which is called macaroni wheat. It contains about 75% starch, 10% water, 10% nitrogen and a very small amount of cellulose. It is very nutritious and is easy to digest. On account of the sticky gluten, a proteid substance which is present in the wheat, the manufacturers of macaroni are able to make a paste of the wheat. It is then drawn out in tubes and baked. When macaroni is cooked it absorbs much water and swells; therefore it must be cooked in a considerable amount of water.

Cheese contains about $\frac{1}{3}$ water, $\frac{1}{3}$ proteid, $\frac{1}{3}$ fat. It is very nutritious but is such a concentrated food that it is hard to digest. The digestion of cheese is made easier by dividing it into fine particles.

The recipe given for white sauce may be used for creaming or scalloping nearly all kinds of cooked vegetables, as carrots, potatoes, celery, cabbage;- also cooked meats chopped fine - as croquettes. It is very nice with creamed or scalloped eggs. It is often used in creamed soups. The white sauce always adds nutritive value to the food with which it is eaten.

In making white sauce for

- (a) creamed soups use 2 tbsp. flour to 1 c. of milk.
- (b) for vegetables use 2 tbsp. flour to 1 c. of milk.
- (c) for souffles use 3 tbsp. flour to 1 c. of milk.
- (d) for croquette mixtures use 4 tbsp. flour to 1 c. milk.

Utensils used.

- 2 pans
- 4 measuring cups
- 2 blue plates
- 2 paring knives
- 1 small kettle for turnips
- 2 teaspoons
- 5 tablespoons
- double boiler (upper portion)
- 1 double boiler (complete)
- 1 fork
- 2 baking dishes
- 1 small cup
- 1 small skillet
- 1 finger bowl
- 1 sauce dish
- 2 plates
- 1 tray with cloth
- forks for serving

Ingredients.

1 turnip
1 tsp. salt
2 tbsp. grated cheese
2 tbsp. macaroni
6 tbsp. crumbs
1 c. milk
2 tbsp. flour
4 tbsp. butter

Fourth Demonstration.

Carbohydrates - (continued).

Scalloped Cabbage.

White Sauce No.2.

1/2 c. milk
1 tbsp. flour
1 tbsp. butter
1/16 tsp. salt.

Heat butter until it bubbles. Stir flour and salt into butter until smooth. Add the cold milk. Cook seven minutes over direct heat. Stir constantly.

Wash and chop cabbage. Cook 2/3 cup cabbage in boiling salted water until tender. Fill baking dish with alternate layers of cabbage and white sauce. Cover with buttered crumbs. Bake until sauce bubbles. Do not spread crumbs on smooth but leave rough. It looks better.

The nutritive value of this dish may be increased by adding grated cheese to the white sauce.

In the classification of vegetables, cabbage comes under

the heading of leaves. Cabbage, like turnips, contain more water than milk. When it is uncooked it is valuable in the summer months, as are most green vegetables, on account of the large amount of salts and water they contain. The salts help to keep the blood supplied with alkali and the water helps to regulate the temperature of the body. Cabbage contains a large amount of cellulose which is not absorbed and made use of by the body but is excreted as waste. On account of the indigestible residue, peristalsis of the intestine is increased. For this reason foods containing much cellulose are valuable in cases of constipation. The effect of cooking green vegetables such as cabbage, is to reduce their already poor stock of nutrients. They take up water and lose part of their carbohydrate and proteid, much of their mineral matter and most of their nitrogenous constituents. Adding white sauce to the cooked vegetables, increases the palatability and the nutritive value. Cabbage should always be cooked without a lid. Cellulose is not soluble in cold water but is slightly soluble in acids and is softened by hot water. The digestibility of raw vegetables containing much cellulose is increased when made into a salad on account of the acid present.

Note: (The above may be given while cabbage is being prepared and put on to cook. Water should be put on to boil before the Demonstration).

Cream of Tomato Soup.

1/2 c. white sauce

1/4 c. strained tomato juice and pulp

spk. baking soda

Bring tomatoes to a boil and add soda. Combine with white sauce and reheat quickly. Avoid bringing to a boil. Whip with Dover egg beater and serve.

White Sauce No.3.

Scald milk in double boiler. Rub butter, flour and salt to a smooth paste. Pour hot milk onto mixture slowly. Return to double boiler and cook twenty minutes, stirring until it thickens. As this is a soup the proportions of butter, flour, and milk will be 1 tbsp. each of butter and flour and 1 c. of milk.

(While recipe is being given the white sauce may be made)

(While stirring white sauce the following remarks may be given.)

The tomato is a vegetable which was introduced into this country about sixty years ago. In the vegetable classification it comes under the heading of fruit. It is very wholesome when eaten raw as a salad. It is refreshing, slightly acid, and easily digested. The acid present, oxalic acid, is injurious to some people. On account of the acid present, tomatoes should never be cooked in tin. The tin is apt to unite with the acid forming a poisonous compound. The composition of a fresh tomato is 94% water, 4% carbohydrate. The carbohydrate being mostly cellulose. There is a small per cent of proteid, fat and mineral matter. The juice of the tomato, containing mostly water has but little nutriment, but added to the white sauce a delicious and nutritious dish is obtained. The soup may be eaten with crisped crackers or croutons.

(The assistant may finish stirring the white sauce while the tomato is prepared for the soup. After soup is made, the white sauce and buttered crumbs may be prepared for cabbage. The soup may be kept hot in double boiler so all may be served at once.)

Dried bread crumbs, besides being useful in scalloping dishes, they may be used in breading fried foods and for thickening.

Utensils used.

3 measuring cups
4 tbsp.
3 teaspoons
2 double boilers
2 wooden spoons
1 small frying pan for buttered crumbs
1 paring knife to cut cabbage
1 small kettle for cabbage
1 baking dish
1 pointed knife
1 small kettle for tomatoes
1 dover egg beater
1 small cup
1 soup bowl
1 plate
1 finger bowl
1 tray with napkin
spoons and forks

Fifth Demonstration.

Cocoa and Chocolate.

Breakfast cocoa.

1 c. scalded milk
1 c. boiling water
1 tbsp. of cocoa
1 tbsp. of sugar (more or less according to taste of individual) Scald the milk in a double boiler; mix the sugar and cocoa, stir in the boiling water, gradually, and let boil five or six minutes; (This is to cook the starch present in the cocoa

powder.) Turn the liquid into the hot milk, and beat with a whisk, or egg-beater, five minutes. Serve with additional sugar and cream, if desired. The cocoa is beaten to prevent a scum from forming on the surface. When milk is heated, some of the casein separates from the lime salts and becomes entangled in the fat. This casein, fat and a little coagulated lactalbumin float to the surface. Some water evaporates and a scum is formed.

After cocoa is made it may be set on the back of stove in a double boiler until ready for use. It is made lighter by whipping some air into it just before serving.

Chocolate Fudge.

- 2 c. granulated sugar
- 2 oz. (2 squares) chocolate (melted over steam).
- 1 c. scalded milk
- 1 tbsp. butter

Cook sugar, chocolate and milk to soft ball stage. Add butter just before it is done. Remove from fire, add 1/2 tbsp. vanilla and let stand in cold water about three minutes or until it wrinkles on top and is thick below. (This keeps it from being grainy.) Beat until creamy.

Although cocoa was first taken to Europe from Mexico by Columbus in 1520, it has not been a popular drink until recently. Cocoa and chocolate are both prepared from the cocoa bean. "The cocoa tree blossoms frequently and yields two crops a year of a bright yellow soft fruit. The fruit which bears some resemblance to a cucumber, contains two or three dozen colorless seeds embedded in a mucilaginous material. When dried in the sunlight, the seeds acquire a bright yellow or brown color and harden. The cocoa starch grains are spherical." The seeds are separated from the pulp and piled into heaps for several days to ferment.

This loosens the pulp, modifies the bitterness and darkens the color. They are then made brittle by roasting. These seeds or nibs are ground between hot rollers. This process, by melting the fat, reduces them to a fluid. Most of the fat is removed by pressure, and the rest of the cocoa is run into moulds, from which it is removed as slabs. To make the so-called soluble cocoa, the slabs are again ground into a powder. Chocolate consists of ground cocoa from which the fat has not been removed, mixed with cane sugar, starch and flavorings, such as vanilla, meat extract and various other things. Poor chocolate is made from the unfermented beans, and is bitter. Good chocolate should melt easily in the mouth, and should not sweat out any sugar in the form of a bloom.

The stimulating effect of cocoa is due to an alkaloid, theobromine, a principle closely related to thein of tea and caffeine of coffee. It also contains some tannins. The action of cocoa on the nervous system is very much less than tea or coffee, owing to the small amount of alkaloid. It is really so small that it is hardly worth considering. Cocoa has but little nutritive value on account of the very small amount taken at any one time. When made into a beverage, the nutritive value is high due to the milk and sugar. The fat of cocoa is hard to digest and should be avoided in such cases.

Chocolate fudge contains much nutriment due especially to the sugar and milk. Too much of it should not be eaten at one time for if eaten in excess it will be apt to cause indigestion. Mountain climbers often carry sweet on their trips to give them strength and energy.

Demonstration in Serving Cocoa.

When cocoa is served alone, it should be served in after

dinner cups with saucers. The cocoa should be placed directly in front of person with the handle of cup at right angles to edge of table or at an angle of about 45°. The cream and sugar may be passed on a tray, by the waitress. The tray should be held in left hand and on the level with the table, while a person is being served. The waitress should always serve from the left of the one being served.

Utensils used.

3 measuring cups
2 tablespoons
1 double boiler
1 wooden spoon
1 paring knife
1 small cup
1 kettle for fudge
1 finger bowl
2 plates for fudge
after dinner cups and saucers
spoons

Sixth Demonstration.

Carbohydrates - continued.

Breakfast foods.

Cream of Wheat with Stewed Figs.

1/4 c. cream of wheat
1 c. boiling water
1/8 tsp. of salt
4 figs.

Add the salt to boiling water which is in upper portion of double boiler and over direct heat. Add slowly the cream of

wheat, stirring constantly. When it has cooked for ten minutes over direct heat, put upper into lower portion of double boiler and let cook 50 minutes or more. The figs may be washed and cut into small pieces, then stirred into the boiling cream of wheat and cooked with it or may be previously stewed until tender then served hot or cold with the cereal. Cream of wheat may be put into moulds when it is cooked and served as a cold dessert with sugar and cream or stewed figs.

In this lesson the figs will be cooked with the cereal.

Oatmeal.

1/4 c. oatmeal

1 c. boiling water

1/8 tsp. salt

Sprinkle the oatmeal into the salted boiling water. Cook over direct heat for ten minutes. Stir constantly to keep from sticking. This may be done in the evening. Put the kettle into fireless cooker. Cover tightly and leave over night to cook. In the morning reheat and serve.

(While giving the following remarks the assistant may pass the cream of wheat and oatmeal which had been previously prepared according to directions. For that cooked during the demonstration would not be ready to be served before the end of the hour.)

Breakfast foods are made from cereals which belong to the family of grasses. "The only part of them made use of as a human food is the fruit or seed. In all grasses there is laid up in the seed a storehouse of nourishment for the young plant during the early days of its career." In all of the cereals, - proteids, carbohydrates, fat, and mineral matter and water are represented. The general composition of cereals is as follows:-

- Water - 10 to 12%
- Proteid - 10 to 12%
- Carbohydrates - 65 to 75%
- Fat - 1/2 to 8%
- Mineral matter - 2%

On account of the large amount of carbohydrates present and a lack of the other ingredients, it is necessary to eat some proteid and fat with the cereal in order that it may be a complete food. The carbohydrates of the cereals are present in the form of starch. There are small quantities of sugar and a little cellulose. The cellulose is mostly in the outer coverings of the cereals. The following points should be followed in preparing breakfast cereals.

1. A double boiler, or a kettle and fireless cooker may be used.
2. Correct proportions of water, cereal and salt.
3. Temperature of water when cereal is added (212°F.)
4. Time for cooking.
5. Manner of serving.

General rules for preparing cereals.

1. To one part of cereal allow from two to eight parts of water.
2. To one cup of cereal allow one-half to one teaspoon of salt.
3. Time of cooking varies according to
 - a. Kind of cereal
 - b. Methods of cooking
 - c. Taste of individual
 - d. Should never be less than 45 minutes to 1 hour - longer time of cooking improves the flavor and digestibility of all cereals.
4. Method of cooking.

a. Soak over night in cold water. Put on in double boiler in morning and cook from 1 to 8 hours according to time.

b. 2nd. method. Sprinkle the cereal into salted boiling water. Cook over direct heat for 10 minutes. Stir constantly to keep from sticking. Cook in double boiler for 50 minutes or more - according to time.

c. 3rd. method. Sprinkle the cereal gradually into salted boiling water and cook from 1-1/2 to 2 hours.

d. 4th method. Cereals may be cooked at night while the evening meal is in process of preparation. The scum removed from top and the cereal reheated in the morning.

e. 5th method. Cook 10 minutes over direct heat in the evening. Put into fireless cooker and let cook over night. It is necessary to cook a cereal for a long time so the starch grains will swell, causing the cellulose surrounding the cell to break, setting free the starch which may then be cooked. Thorough cooking causes the cereal to be more easily digested.

Care must be taken to avoid having the mush too soft, else it is liable to be swallowed without mastication. As we have learned, the digestion of the starch begins in the mouth by the action of the ptyalin of the saliva. If a cereal is not properly cooked and masticated when eaten with sugar and milk, it is apt to cause acidity of the stomach or heartburn, or dyspepsia. Oatmeal is a very hearty food and those who eat much of it should have plenty of outdoor exercise. If ill-cooked and if given to very young children, it causes colic and rashes. Cereal foods may be served as a vegetable with meat in place of potatoes if desired. For variety different sweet fruits may be cooked or served with the cereal. "Raisins should be added with the salt to the water in which the cereal is to be cooked. After removing

the seeds from dates, cut into quarters and stir into the cooked cereal; cover and return to range long enough to heat the fruit thoroughly." Prunes should be stewed previously until tender, then served hot or cold with the cereal. "Bananas may be sliced without cooking, and then served with the hot cereal; but even these will be found to be more agreeable if they be cooked.

Strongly acid fruits should never be served with cereals, as the acid retards the action of the ptyalin of the saliva so the starchy food will not be properly digested.

The so-called "Prepared Breakfast Foods" have been previously cooked sufficiently so that part of the starch is changed to dextrin. Dextrin is a sugar, readily absorbed by the system. In preparing most of the breakfast foods the cereal has been divided into very thin flakes, so that it takes a large amount of the food to give much nutriment to the body.

Utensils used.

- 2 measuring cups
- 2 teaspoons
- pan in which to wash figs
- 1 double boiler
- 1 paring knife
- 1 spatula
- 1 wooden spoon
- 1 kettle with tight fitting lid
- 1 fireless cooker
- 2 plates
- 2 oatmeal dishes
- 1 finger bowl
- spoons
- 1 tray and napkin

Seventh Demonstration.

Proteid Foods - Eggs.

"An egg is an undeveloped chick." It contains all the building material necessary for the making of the chick, for out of an egg the entire structure of the bird - its bones, nerves, muscles, viscera and in some cases feathers are developed previous to hatching. The inner portion of the shell is dissolved by phosphoric acid to furnish phosphates for the bones.

The general composition of a hen's egg is:-

	Water.	Proteid.	Fat.	Mineral Matter.
White	85	12	.25	.59
Yolk	50	16	31.	1.09

The white contains more water than the yolk but contains less proteid, fat and mineral matter. Other eggs than hens eggs are often eaten, - ducks, turkey, goose and the eggs of some fish. The flavor of egg depends upon the kind of the bird or fish and the food they eat. A raw egg is the most easily digested form but is not palatable. When added to cocoa, milk, or beef tea and many other foods, it forms a very important food in the diet of the sick. The digestibility of the white of the egg is increased by beating. This breaks the cell walls which contain albumen. The cell walls being ruptured, the albumen is set free which is more quickly acted upon by the gastric juice.

The first recipe will be an omelet.

An omelet is a combination of eggs and milk, well seasoned and cooked in butter. Recipe.

1 egg yolk

2 tbspn. liquid

1/8 tsp. salt

1/2 tsp. butter

1 egg white

Beat yolk slightly, add liquid and salt. Beat white until stiff and dry. Melt butter in omelet pan. Fold yolk mixture into white and pour into omelet pan. Cook slowly until set and the under portion is a delicate brown. Slip spatula under half of omelet next to handle of pan. Fold omelet and turn onto heated plate. Garnish with parsley. Serve immediately.

If desired small quantities of meat, fish, vegetables, or fruit may be added; but little value by themselves but which increase its substance and savoriness.

There are three ways of combining ingredients, two ways of which are used in making omelet.

1st method of combining is: Stirring.- A method employed to mix ingredients. A circular motion, widening the circle until all is blended.

2nd method: Beating,- Employed to enclose air. A turning of ingredients or ingredient over and over, continually bringing the under part to the surface, thus allowing the utensil used to be brought constantly in contact with the bottom of the dish and throughout the mixture.

3rd method: Cutting and Folding,- Employed to so mix ingredients that air already introduced may not escape. A repeated vertical downward motion with a spoon and a turning over and over of mixture allowing bowl of spoon each time to come in contact with bottom of dish. These motions are alternated until thorough blending is accomplished. (assistant may serve omelet as soon as cooked.)

Boiled Eggs.

For each egg put one pint of boiling water into a hot saucepan (less will do where several eggs are to be cooked.), gently lower the eggs into the water and let stand, uncovered, on the back of the range, where the heat will neither be increased nor diminished, eight or ten minutes. If wished very firm, let stand forty or forty-five minutes, covering the saucepan after the first five minutes.

An egg should never be boiled. If boiled three minutes, the white becomes tough and leathery while the yolk has hardly felt the heat. They are not palatable and are hard to digest. If the egg is boiled five minutes, a hard leathery mass results that is very indigestible. An egg should be cooked between 160° and 180° F. The white begins to coagulate at 134° F.

Poached Egg in Cream on Toast.

Brush the bottom of omelet pan with butter. Pour in 1 cup of cream. Heat to almost boiling point. Stir the cream to form an eddy and drop egg in. Remove to back of stove and continue to stir until the albumen has coagulated. Dip the cream up with a spoon and pour over the egg until a film forms over the yolk. Let stand two minutes. Remove with a skimmer and arrange on a slice of bread toasted, after removing the crusts, and buttered. Season cream with butter and salt. Pour over egg. Garnish with water cress or parsley.

An egg to be poached should be a couple of days old. The white of a new-laid egg is milky, easily dissolved and separated in water or milk, but, if too stale, the cell-walls do not remain firm, and the eggs flatten out.

An egg is considered a proteid food.

Digestion of proteid:

Proteid is not acted upon chemically in the mouth. In the stomach it is acted upon by the hydrochloric acid and pepsin of the gastric juice. The rennin of the gastric juice coagulates milk. In the small intestine it is acted upon by the trypsin of the pancreatic juice. It is then absorbed.

Some important points concerning eggs.

1. Baked and fried eggs are very hard to digest.
2. If eggs disagree it may be due to the fat or sulphur that is in the yolk.
3. An egg deteriorates after 24 hours.
4. An egg beats up better after 24 hours old, and when cold, also when beaten before an open window.
5. Cream of tartar or salt, either of which stiffen albumen, help the beating process. Beat slowly at first but more rapidly toward the end.
6. To gain the greatest possible amount of air whites and yolks must be separated. When the yolk and white are beaten together, the fat of the yolk makes it impossible for air to get in or water to pass off.
7. Yolks should be beaten until they become lighter colored and thickened.
8. A spoonful of water or milk may be added to each egg for economy.
9. The whiteness of beaten white is due to air and loss of water.
10. There are two objects in beating eggs,- (1) To mingle the two parts, as custards. (2) To incorporate air with it, as for a cake.

Utensils used.

1 bowl
1 small cup
1 teaspoon
1 dover egg beater
2 omelet pans
2 spatulas
2 measuring cups
1 sauce pan
1 tablespoon
1 skimmer
1 pan for parsley
1 cup for serving egg
3 plates
1 tray with napkin
1 finger bowl
forks and spoons

Eighth Demonstration.

Proteid - continued.

Milk.

Milk though classed as a beverage, is really a food. It contains 87% water, 3.3% protein, 4% fat, .5% carbohydrates. Because of the nutritive value of milk, the food taken at a meal with the milk should be decreased when milk is served with it. Milk is a complete food for a child under one year of age, but if an adult attempts to live on milk alone, the color leaves the face and the complexion is very white. This is due to the lack of iron which is a necessary constituent of the blood.

Infants have a superfluous amount of iron stored in the liver at birth and so do not need it in the food. When the milk reaches the stomach, the albumen and casein, (the protein of the milk) are acted upon by the rennin of the gastric juice, forming a curd. A curd being formed, the protein substances are prevented from passing on into the small intestine without being partially digested in the stomach. Milk should always be sipped instead of being taken a glass full at a time. If sipped the curds are small and can be much more easily acted upon by the digestive juices. There is also some rennin in the small intestine that acts upon milk. (The above may be given while the milk for rennin custard is being measured and heated.)

Rennet Custard or Junket.

1/4 c. milk

1/16 tablet of junket (rennen tablet)

1 tsp. sugar

Drop of vanilla

Heat milk until luke warm. Add sugar and flavoring. When the sugar is dissolved, pour the mixture into a dish for serving. Then stir in the rennet and set away to cool. Serve with sugar, cream or fruit. The rennet should be stirred in gently.

Junket is an old-fashioned dish that has but lately come back into style. It was the former custom to clean a piece of the inner lining of a calf's stomach. This having been salted was put into warm milk (98°F.) This process was unsatisfactory for it was hard to always use the correct amount of ingredients. Now a days we may purchase junket tablets. - each tablet is sufficient to curd one quart of milk if the milk is at the proper temperature.

Soft Custard.

Definition,- A custard is a mixture of milk and egg, sweetened and flavored.

Recipe for Soft Custard.

1 egg
1/4 tsp. vanilla
2 tsp. sugar
1 c. of scalded milk
spk. of salt.

Beat the egg slightly, add the sugar and salt; dilute with a little of the hot milk, adding a little at a time. When well blended, return to double boiler. Cook and stir until the mixture thickens on the spoon. Strain into a cold bowl. Add flavoring.

There are several kinds of custards,- soft, stewed, baked, fried and frozen. Custards should be cooked at about 180°F. If cooked at a higher temperature the custard may curdle, or whey may separate or the custard may be full of holes either large or small.

The general formula for a custard is,- to one cup of milk use one egg or its equivalent, 2 to 4 tsp. of sugar, 1/4 tsp. flavoring, spk. of salt. The proportions of milk and eggs may be varied according to the firmness of custard. One egg to each cup of milk gives a custard of delicate consistency. It is necessary that this custard be served in the dish in which it is baked. A custard to be moulded should have 2 eggs to 1 cup of milk. Whole eggs, whites or yolks alone, are used in custards, but the richest and finest grained custard is when the yolks predominate. A custard, where just yolks are used, breaks easily. A firm custard should have some whites. Two yolks count as one

egg. In a liquid custard all yolks are preferable unless the whites beaten until foamy are added last to give a fluffy texture. As eggs are added to custards simply for thickening or richness, and not to produce lightness, they are beaten but little. A double boiler is essential in making a soft custard. When a custard has curdled, caused by too much heat, too long cooking or insufficient stirring, it may be removed from fire and beaten with a dover egg beater to break the curd. When a custard is to be baked it should be put into a baking dish containing water. Temperature below 212°F.

Third recipe is:- Milk Sherbet.

- 1/2 c. milk
- 1 tbsp. sugar
- 2 tbsp. lemon juice

Add lemon juice to sugar and pour on gradually the milk; then freeze. One half milk and one half cream may be used in place of all milk.

(Some milk sherbet made and frozen before time for demonstration may be served at this time with the soft custard and Junket Custard.)

Milk sherbet is a very palatable and refreshing dish. The sugar and milk give it nutriment and lemon juice adds flavor.

The care of milk is very important, for it readily absorbs odors, flavors, and impurities; disease germs thrive in milk and multiply rapidly. The cow should be in a healthy condition, the milker should have clean hands and clothes, and his utensils should be sterilized. The milk should be thoroughly chilled as soon as possible after it is drawn. Milk should always be kept tightly covered so bacteria may not enter.

The souring of milk during a thunder storm is not due, as is generally supposed, by the storm, but to the warm sultry weather preceding, which is favorable to the growth of bacteria.

Utensils used.

3 glass measuring cups
3 teaspoons
1 sauce pan for rennet custard
2 moulds
1 cream pitcher
2 bowls
1 sharp pointed knife
1 double boiler
1 top portion of double boiler for sherbet
1 puree strainer
1 tablespoon
2 wooden spoons
1 finger bowl
1 tray and napkin
2 sherbet cups
2 plates
teaspoons

Ninth Demonstration.

Proteid - continued.

Meat.

Baked Hamburg or Cannelon of Beef.

1 lb. of meat
1 egg
1 tsp. salt
1 tsp. onion juice

Grind meat with food cutter. Beat egg slightly. Add egg, salt and onion juice to beef. Mix thoroughly and shape into a loaf 2-1/2 inches thick. Place in oiled baking pan and bake 20 minutes in a moderate oven. This meat has been previously ground at the butcher shop to save time, labor and dishwashing. It is from the shoulder of a beef and is tough and hard to digest unless divided into very fine particles and properly cooked. The egg should be but slightly beaten for in this case it is used for thickening and flavor rather than to make the dish light by beating in air. The onion juice is added for flavor and to make the meat more palatable.

Pot Roast of Beef.

Choose a compact piece of beef. Wipe with clean damp cloth. Sear all surfaces. Plunge in boiling water and boil rapidly five minutes. Choose a kettle to fit the roast to avoid excess of water. Add 1 teaspoon of salt for each pound of meat. Draw to back of range and cook slowly until done. At least 30 minutes to a pound and 30 minutes extra. During the latter part of the process, leave the kettle uncovered until the water is evaporated. Brown the meat in the fat that is in the kettle.

Just as soon as the meat is delivered, the paper should be removed and the meat wiped with a clean damp cloth. It should then be placed in a cool place so the conditions may be unfavorable for the growth of bacteria that are on the meat. The meat should be a red color and if much fat is present, the meat is more apt to be tender.

There are two objects in cooking meat.

- 1.To render more sightly and palatable.
- 2.To destroy bacteria and parasites.

Principles of Cooking.

The aim in boiling, roasting, broiling and frying meat is to retain all juices in meat and to coagulate the albumen on surface. The smaller the piece the greater the heat.

The aim in preparing soups, broth and beef tea is to draw out all the juices. Soak in cold water. Draw out juices, but little if any nutrients.

The aim in stewing meat is to draw out part of juices and leave remainder in meat. Put into cold water and heat gradually to 180°.

Stewed Meats.

The tougher cuts of meat, such as the flank, the leg, the shoulder and in fact all the meats found in the lower part of the animal, require long, slow cooking. Although cheaper than the tenderer cuts they contain just as much nourishment, are of better flavor and may be made palatable in the form of stews. To stew meat, cut into small pieces and trim the edges. Dredge with flour and brown in fat. Cover with boiling water or stock and move to the end of the stove where it will simmer, not boil. Proper temperature is 180°.

Ribs may be roasted. Chuck, porterhouse, round, and sirloin may be broiled. Chuck, flank, round, neck, shoulder, brisket and plate are used for stew. Soup meat comes from the leg; beef off the round is suitable for beef tea. If this pot roast were allowed to boil vigorously during the entire cooking the connective tissue would be gelatinized, while the fibers are hard and indigestible. Quite the reverse is true of the fibers where the meat is cooked for a longer time at a lower temperature, and the connective tissues are partially dissolved. Cold water

dissolves albumen, hot water coagulates it, as does intense heat.

Pan Broiled Steak.

Remove from steak all fat, bone and cartilage. Oil the smoking hot frying pan with a small portion of beef fat. Place steak in pan. At first hold the broiler close to the clear coals, count ten and turn; count ten again, then, the juices being imprisoned by the strong heat, remove to a greater distance from the fire, and continue cooking and turning the meat every ten seconds, to insure slow and even cooking. Cook first steak from five to eight minutes and the second, eight to ten minutes. When done, lift onto hot platter. Sprinkle with salt and serve with or without parsley butter.

Parsley Butter or Maitre de hotel.

- 1 tbsp. butter
- 1 tsp. lemon juice
- 1 tsp. chopped parsley
- 1/8 tsp. salt

Cream the butter. Add the parsley and salt. Add the lemon juice slowly. Place on food and allow the heat of the food to melt the butter.

Steaks may be cut an inch or an inch and a half thick. When properly broiled the steak is puffy from the expansion of the collagen and the moisture imprisoned within; it is well browned to the depth of one-eighth an inch, juicy and uniformly red in appearance within. (The roast will not be done at the close of lesson but the Baked Hamburg and Pan Broiled Steak may be served at once.)

The broiled steak may be garnished with slices of lemon, water-cress, pepper grass or parsley.

Utensils used.

1 saucer
5 teaspoons
2 forks
1 mixing bowl
1 baking pan
1 wooden spoon
1 spatula
1 kettle with lid for pot-roast
1 paring knife
1 frying pan
1 tablespoon
1 sauce pan
1 finger bowl
2 plates
forks
1 tray and napkin

Tenth Demonstration.

Proteid - continued.

Meat.

Meat Croquettes.

1 c. of white sauce. In making the white sauce use 4 tbsp. of flour.

1-1/2 c. of cold, cooked, ground meat loosely measured.

1 c. of dried bread crumbs.

1 egg.

Add meat to white sauce and spread in a dish to cool. When cold, shape as desired. Roll in crumbs, then egg, then in crumbs. Fry in deep fat. Drain on dry crumpled absorbent paper.

Serve hot either with or without sauce. The eggs should be beaten but slightly and 1 tablespoon of water may be added if desired.

Brown Sauce.

- 2 tbspn. butter
- 2 tbspn. flour
- 1 c. of liquid (milk or stock)
- 1/4 tsp. of salt

Melt butter, add flour and salt and brown. (The meat should be ground and the white sauce made and fat heated, before class. Milk may be used as the liquid in the Brown Sauce.)

The meat used for the croquettes is veal.

Veal is a young calf. The calf should not be under two nor over eight months of age. Veal, like other meat contains about 3/4% water, a large per cent of proteid and a small amount of mineral matter and extractives. It is supposed to be rather hard to digest for it takes two and a half hours for it to digest while beef takes two hours. The reason is not certainly known but it is supposed to be on account of the fibers of veal eluding the teeth on mastication. Veal has a rather insipid taste and so does not excite the flow of the gastric juice. Meat being acted upon by the hydrochloric acid and pepsin of the gastric juice, "the fibers swell up and become softened. Their color then changes to a grayish-yellow; then fall apart, and the mass becomes pulpy. Last of all, the individual fibers split up either into longitudinal threads or transversely into discs" and then is carried into the small intestine. The proteid is there acted upon by the trypsin of the pancreatic juice and absorbed. The pepsin of the gastric juice, acting better in an acid media, it is best to eat some organic acid with the meat to aid in its

digestion. If the fiber of meat is tough, it may be made more tender by soaking it for awhile in vinegar, before cooking. Meat when cooked the second time as in making croquettes, should not be cooked too long, as it will become tough and very hard to digest. The egg and crumbs protect the meat from the heat and make it more palatable. The egg should be very slightly beaten. It is sticky and helps to keep the crumbs in place. A little water may be added to the egg for economy. The fat, in which the croquettes are fried, should be hot enough to brown a piece of bread in one minute. If the fat is ^{not} sufficiently hot, it will soak into the croquette and hinder its digestion. The absorbent paper is used to absorb the fat from the croquettes. Too many croquettes should not be added to the fat at once as they would cool it. The brown sauce adds to the appearance of the dish and also to the nutritive value.

Pork Chops.

Have the chops cut about one-half inch thick. Trim away the extra fat and bones. Try out a small portion of the fat in the pan. Get the pan hot and put the chop in. Brown on both sides and cook thoroughly done. Salt liberally after the chop has been turned. Pork should always be cooked thoroughly so the heat will destroy the injurious bacteria that are usually found in pork. Pork is very hard to digest on account of the high per cent of fat between the fibers. On the other hand, the fat of bacon seems to be in a granular form, which is not difficult to digest, and it can often be eaten with impunity by persons who can not eat other forms of fat. It should be crisped. (The croquettes and pork chops may be served at one time.)

Utensils.

- 3 measuring cups
- 1 rolling pin
- 1 saucer
- 2 dishes
- 1 deep frying pan
- 1 frying basket
- 1 shallow frying pan
- 2 tablespoons
- 1 teaspoon
- 1 sauce pan
- 2 plates
- forks
- 1 tray and napkin
- 1 finger bowl

Eleventh Demonstration.

Gelatin.

Lemon Gelatin.

- 3/4 tsp. gelatin
- 1 tbsp. cold water
- 3 tbsp. water
- 2 tbsp. lemon juice
- 1-1/2 tbsp. sugar.

Swell the gelatin in 1 tbsp. of water. Dissolve the sugar in lemon juice and 3 tbsp. of water. Dissolve the gelatin over hot water and combine with lemon mixture. Strain into wet moulds and chill until firm.

In this lesson I will use four times the recipe and mould the gelatin in a finger bowl. I shall make a strawberry bavarian

to be moulded with the lemon gelatin.

Directions for Moulding.

Pour a layer of gelatin across bottom of finger bowl, or any other dish will do. When partially solid, on this lay a decoration of fresh strawberries and citron leaves. Drop some gelatin on each part of decoration to hold it in place. Put a thin layer of gelatin on top so it will be perfectly smooth. Place a small tin cup in center and fill up the bowl around the cup. The top of cup should come to top of finger bowl. Chill until solid. Make a Bavarian and put it in the place of the cup and chill until that is solid.

(While the first layer of the lemon gelatin is getting hard, the aspic jelly may be made.)

Aspic Jelly.

Clear $1/2$ cup of stock.

Clear by adding the white of one egg slightly beaten and crushed egg shell, to 1 qt. of stock. The adhesive nature of the albumen causes it to stick to all tiny particles which float, making the liquid turbid; heat then coagulates it, making it settle to the bottom, carrying the particles with it and leaving the liquid clear. Bring the stock slowly to a boil, stirring all the time. The egg will coagulate taking all the sediment with it. Boil about five minutes. To 1 qt. of stock add $1/2$ c. of cold water. Remove from fire and allow to decant as far as possible. Add $3/4$ tsp. of gelatin, dissolved in 1 tbsp. of cold water over hot water, to $1/2$ c. of stock. Color it when hot with a little caramel. The caramel is not necessary but the jelly is much prettier with it. Mould gelatin with pieces of boiled tongue and boiled egg. Pour a thin layer of gelatin into wet mould. Let partly harden, then make a design of the egg and

boiled tongue and pour on the remainder of gelatin. Put on chopped ice until hard.

Caramel is made by heating sugar to a high temperature. It loses its water of crystallization, dextrin is formed and it becomes brown.

The stock may be made from almost any kind of meat, as beef, mutton, lamb, veal, poultry, game, etc. They may be used either alone or in combination. (The stock, tongue and egg were prepared and cooked before the time for this demonstration.)

The first object in making stock is to draw out the soluble juices and flavoring constituents into the water. The second is to keep that which has been drawn out in a wholesome and agreeable condition. The meat should be cut into small pieces and left to soak in cold water about one-half hour or until the water is well colored. Place the kettle over the fire and gradually heat the contents to the boiling point and skim. Then let the water simmer or bubble slowly and constantly for five or six hours. It should not be allowed to boil for that would lessen the digestibility and delicacy of flavor.

(At this time the decoration of citron leaves and strawberries may be added to the lemon gelatin and more of the gelatin added.)

Strawberry Bavarian.

1/4 c. heavy cream

2 tbsp. sugar

1/4 c. crushed strawberries and juice

3/4 tsp. gelatin

1 tbsp. cold water

2 whole strawberries

Swell the gelatin in cold water. Dissolve over hot water

add the sugar and gelatin to crushed berries. Set the mixture in crushed ice. Allow to thicken to a syrup - stirring occasionally. Whip the cream stiff and add to berry mixture. Pour into a wet mould which has been decorated with berries. Chill, unmould and serve. Cream to be right to whip should be 24 hours old and very cold. In this case we shall not use the mould but will put the Bavarian in the small cavity left in the lemon jelly after removing the little cup. Pineapple or any other kind of fruit may be used in place of strawberries. If pineapple is used it must first be scalded to destroy the vegetable enzyme pepsin which acts similar to the pepsin of the gastric juice of the stomach. The pepsin digests the gelatin so that it will not harden. The composition of gelatin is almost the same as that of proteids. Its digestion is similar, as, like proteids, it is converted into peptones and after being assimilated it is oxidized into carbon dioxide and water. Although it is so much like proteid, it can not be built into tissue and therefore can not wholly replace proteid in the diet. It is a proteid sparer; more so than carbohydrates and fats. But it takes twice as much of the gelatin to replace the amount of proteid removed from the body.

The connective tissue which holds the fibers of meat together is called collagen, and this yields gelatin on boiling. Veal, especially the calves' feet yield a large amount of gelatin. Glue and isinglass are forms of gelatin. The chief physical peculiarity of gelatin is its ability to dissolve in boiling water, and setting into a jelly on cooling. It is always best to let the gelatin stand awhile in cold water and dissolve it in a cup over hot water. It is claimed that an ounce of gelatin will thicken 2 quarts of liquid, but it is safer to use 1 cup less of

liquid. In summer when the gelatin is moulded with fruit, it is better to use 2 ounces of gelatin to 3 pints of liquid, so the gelatin will be stiff enough to hold up the fruit. The flavor of all jellies to which fruit has been added, is improved by adding the juice of one lemon to each quart of juice.

One should avoid heating the fruit juices used with the gelatin, (with the exception of pineapple), lest the characteristic flavor of the fruit be lost.

(At this time the egg and boiled tongue may be placed on the Aspic and more jelly added. Then the Bavarian may be placed in the lemon gelatin in the space left by the cup.)

On account of the jelly's not being firm enough at the close of demonstration, some jellies may be served, made after the same recipes, that had been made before time for the demonstration.

Utensils used.

- 3 teaspoons
- 4 tablespoons
- 3 small cups
- 1 kettle for hot water
- 1 puree strainer
- 1 finger bowl for jelly
- 1 small mould
- 4 measuring cups
- 1 saucer
- 1 sauce pan for stock
- 1 frying pan for caramel
- 1 cream whip
- 2 plates
- 1 finger bowl

forks

1 tray and napkin

Twelfth Demonstration.

Bread.

Recipe for Yeast.

4 medium sized raw potatoes, pared.

1 qt. boiling water

1/4 c. sugar

1 tbsp. salt

1 cake dry yeast.

While the water boils rapidly, grate the potato into the water. Boil until clear like laundry starch. Stir sugar and salt in while it is hot. Cool to luke warm then add yeast cake which has been soaked in a little warm water. Allow to ferment in a stone crock 24 hours. Place in a two quart Mason jar and set in a cool dark place. This will keep about two weeks and the last cup may be used in place of a dry yeast cake in making a new supply. (The water may be boiling and the potato pared before demonstration).

One fourth this recipe will be made in this demonstration.

The potato must be grated in as fast as possible so it will not turn dark. If the yeast is dark the bread will be.

The conditions favorable for the growth of yeast are,- that it should have proper food and moisture and be kept at the proper temperature.

Maltose and glucose are two sugars which are favorable foods for the growth of yeast. The starch of the flour must be changed into a sugar by the action of the yeast, before it may be utilized by the plant.

Some nitrogen is necessary. The yeast gets its nitrogen from salts and organic nitrogenous compounds. Some mineral matter is required by yeast but too much retards its growth.

Oxygen is necessary. The yeast plant does not get it from the air but it is supposed that it gets it from the sugar.

The most favorable temperature for the growth of yeast is from 25° to 95° F. Freezing retards the growth. Boiling destroys all the living yeast cells. A temperature of about 60°F. causes the proteid to begin to coagulate, which is unfavorable in moist yeast. Dry yeast may stand a much higher and lower temperature than moist yeast, on account of the little yeast plants being in a dormant condition. It has been found by experiment that some moisture is necessary for the growth of yeast.

If there is over 35% of sugar present, the action of the yeast is retarded or destroyed. While the potato mixture is cooling for the yeast cake, the bread recipe may be given.

This bread will be made from yeast made two days previous.

Bread.

- 1/4 c. yeast
- 1 tbsp. sugar
- 1 tsp. salt
- 1 c. scalded milk or water or half and half.
- 1 tbsp. shortening (butter).

Add the butter, salt and sugar to milk while hot. Cool to luke warm and add yeast. Stir in a small quantity of flour and beat well. Add flour until the dough can be lifted out with a spoon, leaving the dish perfectly clean. Pour onto a floury board and knead in a little flour at a time until the dough is spongy and elastic. Place in a double boiler or anything that may be tightly covered. A crock is best for the bread may be kept

at a more even temperature. It should be left to rise until twice its original bulk. In cold weather it may be mixed up in the evening, if mixed very stiff, and let rise over night. It is always a finer grain and better texture when mixed extra stiff and given plenty of time to rise. In the summer time it should be mixed up the same day it is baked for the summer heat will cause it so rise too rapidly. After the yeast had used up all the available food material, the bacteria present would cause the bread to sour. If the bread is kneaded stiff late in the evening it may not rise too much in the summer, if left out of doors all night.

Bread is better if made into a sponge and allowed to stand until light before kneading, or if it is mixed up at once, cutting it down after it has risen twice its bulk and allowed to rise again, improves it.

"Dough is kneaded the first time to distribute evenly the little yeast plants and other ingredients, to give body to the dough, and bring out the elasticity of the gluten, and to make the mixture smooth. The second kneading is to break up the large cavities caused by gas bubbles, and to make the texture uniform and fine. When kneading bread, flour the hands." Draw the dough farthest from you over into the center several times, and then turn the whole mass half around. Draw it again from the opposite side toward the centre; and press it down either with the fingers or the ball of the hand, then half turn again, and repeat this, with a sort of rocking motion, until the dough has been thoroughly and evenly kneaded. At first, you must add flour, just a little at a time; but after the dough has lost its stickiness, knead it on a dry board. When it ceases to stick on pressure, the kneading may be discontinued." Bread should be kneaded lightly, if too

much weight is put on the dough the elasticity of the gluten may be destroyed. In the bread mixer there is no danger of this. There is another advantage of the bread mixer, that is,- the bread is not so liable to be contaminated from foreign bacteria that are in the air and on the hands. All utensils used in bread making should be thoroughly scalded before they are used, for the bacteria that may enter the bread in that way, may alter the taste of the bread and may hinder the growth of the yeast.

When the dough is ready for the pans, it should be rolled, not kneaded, to avoid creases in the loaf. When the oven is hot enough for the bread, it will brown flour in five minutes. The oven should be at 280°F. for bread and 360° F/ for rolls. The bread should be thoroughly baked so as to kill all the yeast plants. If they are not destroyed they may set up fermentation in the stomach, destroying the digestion of other starchy foods already in the stomach.

When bread is baked, set on racks and let the air circulate around it to carry off all the gases caused by the fermentation of the yeast.

Do not cover the bread, as in this way the moisture is held, destroying the crispness of the crust and making the crust rather heavy.

When cool, bread should be put away in a clean tin bread box. An earthen jar keeps the bread more moist but the bread is apt to mould in it.

"Weight for weight, though not bulk for bulk, bread is one of the most nutritious of our ordinary foods. Bread yields to the blood a large proportion of carbohydrate, a moderate amount of proteid and mineral matter, but almost no fat."

Stale bread and crust are easy to digest but fresh bread is

apt to form a doughy mass in the stomach.

Brown bread may be made the same way as white, except the two cups of graham flour are added and the rest white flour, instead of having all white. Graham bread relieves constipation on account of the cellulose present; but the cellulose is irritating to some people's stomachs.

Parker House Rolls are made the same as bread with the following variations - one-half as much milk and salt should be used. The dough should rise three times its original bulk instead of twice. The dough should be much more slack than bread dough.

(Yeast and bread are the only things that may be made during the demonstration. The bread may be partly kneaded but not baked. Nothing will be served.)

Utensils used.

- 1 pan containing potato
- 1 small stew pan
- 2 tablespoons
- 2 teaspoons
- 2 small cups
- 2 wooden spoons
- 1 grater
- 2 measuring cups
- pan for flour
- pan for mixing bread
- 1 upper portion of double boiler
- 1 finger bowl
- 1 spatula

Thirteenth Demonstration.

Pies, Patty Shells and Biscuits.

There are several different methods of making pastry.

1st. Plain Pastry is made by mixing the shortening into the flour by chopping or with the tips of the fingers.

2nd. Puff Pastry is made by working the shortening into a paste of flour and water by folding and rolling.

3rd. Flaky Pastry- the shortening is mixed into the flour by a combination of the first two methods.

Plain Pastry.

1-1/2 c. flour

9 tbsp butter or about 1/2 a cup.

1/8 tsp. salt.

ice water to moisten.

Measure the butter and flour and chill. Add salt to flour and cut butter into flour with knives. Use just enough cold water to make the particles of mixture adhere together. Put onto an unfloured board and push together with knives. Roll very thin handling as little as possible.

Apple Pie.

Wash, pare and cut into thin slices, tart, easily cooked apples. Cover a pie tin with pastry. Arrange sliced apples smoothly in pan. Sprinkle liberally with sugar and lightly with cinnamon. Add small particles of butter. Make perforations in upper crust. Place lightly over apples and press the edges of pie together with forks and trim. Bake until it is delicately brown. When it is done, it will turn in the tin.

When making pastry it is necessary to have a good fine pastry flour with a small proportion of gluten present. It should be a flour that absorbs moisture least. The shortening

used depends much on the taste of the individual. Lard makes a soft, tender, light colored crust which has a flaky texture. Cottolene makes a crust of a darker color but soft and tender. Beef suet or butter may be used separately or in combination. Butter gives a tender crust of a very good flavor.

Usually about one-half cup of water is used to two cups of flour; but it depends much upon the flour.

In making pastry it is essential that all ingredients be chilled. That is the chief reason why the butter should be cut or rolled into the flour. The heat from the hands is apt to melt the butter.

A perforated plate or tin is desirable for pie making. A marble slab makes the best table for pastry making as it keeps it cool and is not so liable to stick. If a marble slab is not available, a square of sailcloth and a rolling pin, fitted with a stockinet cover, both lightly dredged with flour, are good substitutes. A hard wood board will do very well. A chopping knife and bowl may be used instead of the bowl and two knives. In mixing the shortening with the flour, be careful to keep the flour between the blade of the knife and shortening as much as possible to prevent the latter adhering to the knife. When the mixture looks like meal, each little particle of fat being coated with flour, it is time to add the water gradually. It is better to add it in several places making several little balls rather than adding it just in one place. In this way it may be more evenly mixed. When sufficient water has been added, dredge board very slightly. Roll a portion of pastry into a circular piece one-eighth of an inch thick and a little larger than the plate. When putting the pastry onto the plate, one should be very careful to exclude the air from beneath by putting one-half

on at a time. Do not stretch the paste, but cut it plenty large for it will shrink, even after it is in the oven. Brush over the surface with an egg white slightly beaten, so the liquid of the filling will not penetrate the lower crust. The edges of paste should be dampened with water so the upper crust will adhere to it. The top crust should have slits cut in it, so the steam may escape.

If it is desired to have a glazed crust, brush the top crust with a beaten yolk of egg, one tablespoon of water and a half a tablespoon of sugar beaten together. This may be done before putting the pie into the oven or after it has been in about a half hour. If the pie is to have but one crust, and the filling is already cooked, the crust may be baked on an inverted pie pan before the filling is added. The crust should be pricked so it will rise evenly.

Uncooked pastry will keep a couple of days if kept in a cool place. If the pastry has been baked and has not a filling, it may be kept several days.

Pastry is very hard to digest. In the making, each little particle of starch is enveloped in fat. Being so surrounded, the starch can not be acted upon by the ptyalin in the mouth and so the digestion of starch is postponed until it reaches the small intestine. There the fat is first acted upon by the steapsin, an enzyme of the pancreatic juice, and lets free the starch which is then acted upon by the amylopsin. If the pancreatic juice acts properly, the starch may be digested; but if not, the starch becomes waste material.

Pastry should be eaten but seldom, and in cases of indigestion or dyspepsia it should be omitted entirely from the diet.

(The above may be given while the pie is being made.)

The dough left after making the pie may be made into Patty Shells. Roll the paste to one-fourth an inch in thickness; cut with a round cutter which has been dipped in flour; cut out the centers from one half of the rounds, brush over the edges of the whole rounds with cold water and press the rings upon them. Bake about twenty-five minutes. Bake centers cut from the rings for covers. Fill the round space with jelly, strawberries or some other fruit and put on the small round cover.

Baking Powder Biscuit.

2 c. flour

4 tsp. baking powder

2 tbsp. butter

1/8 tsp. salt

About a cup of milk, milk and water, or water.

Sift the flour, baking powder and salt together. Cut in the butter and add milk. Knead but very little and very gently. The dough should be soft as can be without sticking. Roll and cut quickly. Bake in a hot oven.

The most easily digested part of the biscuit is the crust, for in it part of the starch has become dextrinized. One trouble with hot bread of any kind is its mastication and the fact that it is insufficiently mixed with the saliva. It is apt to form a doughy mass in the stomach which sometimes ferments, causing indigestion. All except the milk may be added to the biscuits an hour or so before they are baked if desired. When the wetting is added the sodium bicarbonate and the acid present in the baking powder interact, causing a gas, CO_2 , to be formed. This makes the dough light and most of it escapes during the baking.

If the biscuits are left in the pan in which they were

baked, they will keep hot longer.

(The two last recipes may be dictated while they are being made.)

The pie, patty shells and biscuits will be baked just before the close of the lesson. They may all be served at once. Each biscuit may be opened and a little butter put in between the halves, before the biscuits are served.

Utensils used.

1 spatula
2 measuring cups
2 tablespoons
2 teaspoons
2 case knives
1 rolling pin
2 plates
1 pie tin
1 paring knife
1 flour sifter
1 biscuit cutter
3 plates
1 finger bowl
1 tray and cloth
forks

Fourteenth Demonstration.

Cakes.

White Cake.

1/2 c. butter
2 cups sugar
1 c. water or milk
5 egg whites

2-1/2 c. flour

4 tsp. baking powder

Bake about 45 minutes. Put on caramel after cake is rather cool.

Caramel Icing.

1/2 c. milk

1-1/2 c. sugar

1/2 c. sugar caramelized

1 tsp. butter

1 tsp. vanilla

Cook the milk and 1-1/2 c. sugar together. When boiling rapidly, add the hot caramelized sugar. Cook the mixture to soft ball stage. Add butter and vanilla and beat until creamy. Spread over the cake.

Rules for Baking a Cake.

1. Build fire and see that the oven is ready.
2. Collect all utensils. Collect and measure all materials needed in preparing the cake.
3. Sift the flour and sugar before measuring so as to have them measured lightly.
4. Mix and sift the baking powder with part of the flour.
5. Cream the butter, add the sugar and cream.
6. If egg yolks are used, part of the sugar should be creamed with these.
7. Beat the eggs, if whole, until light and creamy. If separated, beat the whites until stiff but not dry, and the yolks until thick and lemon colored.
8. If whole eggs or egg yolks are used, add to the creamed butter and sugar.
9. Add the liquid and flour alternately, reserving a portion

of flour containing the baking powder.

10. Add the flavoring and beat well.

Up to this time the cake may be beaten just as much as is desired.

11. Add 1st, the egg whites, 2nd, the flour with baking powder, and fold both together in carefully. If lightness is desired, little beating is best but the grain of the cake is coarse. If fineness of grain is desired, the cake should be much beaten.

12. Fill the pan not more than $2/3$ full and spread the mixture toward sides and corners of pan. For the tendency is for the cake to rise in the center.

13. Bake from twenty minutes to several hours, according to kind of cakes.

a. During the first quarter of time, large bubbles should rise on surface of cake. It may be moved during this time without harm.

During the second quarter of time, it should continue to rise and brown in spots.

3rd. quarter of time it continues to brown and stops rising.

4th quarter of time, it shrinks from edges of pan and becomes elastic to the touch.

14. Tests when done - elasticity to touch in center.

Perfect dryness of toothpick or straw run in cake at center.

15. Small and layer cakes require a hotter oven than a large loaf cake. Sponge or pound cake bakes at a lower temperature than those containing CO_2 . White cake may be baked in a quicker oven than those containing egg yolks on account of the

fat in the yolks. Cakes containing molasses or fruit are easily scorched.

Chocolate Cake.

1/2 c. butter
2 c. sugar
4 eggs
1 c. milk
4 tsp. baking powder
2-1/3 c. flour
1/2 tsp. cinnamon
1 tsp. vanilla
2 squares of grated chocolate

Cream butter, add 1 c. sugar and cream. Cream egg yolks and 1 cup sugar. Combine mixtures. Beat egg whites stiff but not dry. Sift 1/3 cup flour, baking powder and cinnamon. Add to first mixture 2 cups flour and milk alternately beating thoroughly between each addition. Add chocolate melted over hot water, and blend. Fold in whites and flour mixtures. Pour into two loaf pans lined with buttered paper, and bake one hour in a moderate oven.

Icing.

White of 1 egg well beaten. Make a syrup of 1 cup of sugar and 1/4 c. water and boil until it threads. Add gradually to the egg, beating all the time. Beat until stiff.

A chocolate icing may be made the same way except that 1/4 square of chocolate should be added and cooked with the syrup.

As six yolks were left from the white cake and there will be one yellow left from the icing, we shall use the yellows in the chocolate cake instead of the whole eggs.

They may be added to the creamed butter and sugar. Two

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yellows usually count as one whole egg.

Cakes contain a large amount of nutritive material, but the combination of the butter and flour, makes the starch difficult of digestion. Cakes are rich and should not be used in excess for they may cause digestive disorders. Note,-(The white cake may be made while the recipe is being dictated and while the rules for baking a cake are being given. The chocolate cake may be made while the chocolate cake recipe is being dictated. After the chocolate cake is made the caramel icing may be made and the white cake frosted.

The chocolate cake will not be baked before the close of demonstration, so no icing can be made for it until later.)

Utensils used.

- 1 measuring cup
 - 2 mixing bowls
 - 1 bowl for egg whites
 - 1 bowl for egg yellows
 - teaspoons
 - 1 sauce pan for caramel
 - 1 upper portion of double boiler
 - 2 wooden spoons
 - 1 paring knife
 - 4 layer baking tins
 - 1 finger bowl
 - 1 plate
 - 1 spatula
- The white cake may be served on a plate.

Fifteenth Demonstration.

Beverages.

Grape Juice.

Weigh the grapes, and for each ten pounds use three pounds of sugar. Pick the grapes from the stems, put in an agate or porcelain kettle with about five pints of water to a peck of grapes. Cover and bring slowly to the boiling point, stirring occasionally, and when boiling hot throughout turn into a heavy bag and let drain; when cool press out all the juice remaining, add the sugar, heat to the boiling point, skim, steam 30 minutes, and store in fruit jars as in canning fruit. The sugar may be omitted. Other fruit juices, as strawberry, sarpberry, etc., may be prepared in the same way; these are useful for ices, punch, etc.

The grapes have been brought to the boiling point, the juice drained and squeezed from the grape before time for the demonstration. Now the juice, two pints, will be put into the upper portion of a double boiler with boiling water beneath. It is necessary for the juice to be at a high temperature for thirty minutes, as is the case in canning fruits, for the purpose of destroying the bacteria present. All utensils should be sterilized. I will put the pint can, cover, rubber and wooden spoon into boiling water and let the water boil for thirty minutes. At the end of that time, one pint of the juice will be canned and the rest used in making punch.

Syrup for sweetening ices, punches and sherbets:

1 c. sugar

1/2 c. water

Boil rapidly seven minutes. Cool and bottle for use. This should be stirred until it reaches boiling point. After that the spoon should be removed and the crystals wiped down with a swab. The crystals may be prevented from forming by keeping the syrup covered. This syrup will not keep long for a crust is apt to

form and sometimes it is attacked by mould.

The chief value of beverages in the diet is due principally to the large amount of water they contain. "Water is that which slacks thirst and replaces the fluid loss of the body." Its chief functions are,- to regulate the temperature by evaporation from the surface of the body, to act as a solvent, to carry the nutritive material to and from different parts of the body, and to keep the mucous and serous membranes moist. Four pints of water are required by the body daily, less than one-third of which is supplied by the food. If fruit juice and sugar are added to the water, more of the water is taken and the nutritive value is increased considerably by the sugar added and also by the natural sugar of the fruit. The mild acids and other extractives, together with the water of the fruit, help in other ways in the maintenance of good health. Punch does not contain the pulp of the fruit, which is hard to digest. Unfermented grape juice is an agreeable, wholesome, and slightly laxative, non-alcoholic beverage.

Fruit Punch.

The juice of 3 lemons

The juice of 5 oranges

1 pint of grape juice

1 c. pineapple juice

Water and syrup to taste

It is better to make the punch a few hours before the time of serving, then let stand, closely covered, on ice to chill.

Strawberries, mint leaves, or slices of banana are often added as a garnish.

This punch will be chilled and served at the close of demonstration.

Boiled Coffee.

1 c. of coffee finely ground

1 egg

2-1/2 c. cold water

6 to 8 c. boiling water

Mix the coffee, egg and 2 c. of cold water. Boil three minutes. Add the boiling water and let come to a rapid boil once. Draw to back of range. Add one half cup of cold water and let stand one minute to settle. Decant into heated coffee pot.

This method of preparing coffee is by "Decoction." In this method, the coffee beans are ground, and placed in cold water, which is then heated to boiling. When boiled but a few minutes some aroma still remains, but it is soon driven off, and continued boiling extracts more caffeine than is obtainable by infusion. The caffeine is stimulating property of coffee. Volatile oil is also stimulating. There are two other methods that may be used in the preparation of coffee:

1st. In filtration, boiling water is allowed to percolate slowly through finely ground coffee. Air should be excluded as much as possible during the process; otherwise the oxygen alters the aroma.

2nd. Infusion. This method is supposed to reduce the exciting influence of strong coffee without destroying its aroma or otherwise altering it. In this process, the finely ground coffee is put into water previously boiled, but removed from the fire, and allowed to stand for about ten minutes at a temperature of 180° or 190°F.

Coffee long boiled or left standing in the coffee pot over the fire, as in the case of tea, becomes more and more indigestible from extraction of tannin. Tannin is injurious to the system

and is not desirable in coffee or tea.

Coffee is the seed of an evergreen plant. The plant is allowed to grow from eight to ten feet and bears a pretty white flower which is succeeded by a red berry the seeds of which are the coffee beans, each berry containing two seeds. The berry is gathered, the outer covering is taken off first and then the parchment like covering which covers the two seeds.

Eggs may be used to clarify coffee because of the adhesive nature of the albumen. The particles of coffee stick to the albumen. Heat then coagulates the egg causing it to settle to the bottom, carrying the particles with it and leaving the liquid clear. If too much egg be used the full strength of the coffee will not be obtained, the albumen preventing its escape. Eggshells therefore, wiped clean before breaking, are sufficient to make the coffee clear if one or two are used for one quart. Coffee should be ground just before using on account of the volatile oil.

Coffee strengthens heart action, increases respiration, and excites mucous membrane. It is a nerve stimulant and a diuretic. It removes the sensation of fatigue. Relieves nausea.

A cup of black coffee assiste digestion if taken at the close of a hearty meal, especially if too much has been eaten. It excites the digestive juices to a more rapid flow.

A cup of breakfast coffee as ordinarily served, retards digestion. The sugar and cream added, increase the nutritive value, but do not aid in the digestion.

When taken in excess, coffee produces biliousness, languor, restlessness, heartburn, palpitation of the heart, dyspepsia and insomnia.

(At this time a part of the grape juice may be canned, the

rest chilled for punch.) The can should be filled to overflowing with the juice so that when the cover is placed, and screwed on tightly, the air may be excluded. Everything used in canning should be sterilized so as to lessen the chances of the growth of the bacteria.

Tea.

8 tsp. or 1/2 cup of tea

8 c. of water.

Bring water just to boiling point so as not to have the gases pass off more than is necessary. Add tea and allow to stand three minutes and no more. Strain the tea into a hot cup and serve. A piece of lemon added to tea gives flavor. If the tea stands more than three minutes, the tannic acid is dissolved which is injurious. The theine which is the stimulating property is dissolved out first. Tea is named according to the position of the leaves on the stem. The smallest leaves are jucier and have a better flavor. These produce Pekoe tea. The next larger leaves produce Souchong.

The difference between black and green tea is that green tea is made by steaming the leaves before they are rolled and dried. There is more tannin in green tea.

Tea drinkers require less food for there is less wear to the tissues when frequently used.

When tea is used to take the place of food, the system is less able to resist disease.

Tea is stimulating, refreshing, and often relieves bodily fatigue and headache. It is a cooling drink in summer and a warming drink in winter. Excessive use of tea causes nervousness, insomnia and mental depression.

(At the close of demonstration, the tea, coffee, and punch

may be served at three different tables, by three of the club ladies.)

Utensils used.

1 double boiler
1 kettle containing grape juice
1 pint can
1 rubber
1 cover
1 pan of water and cover for sterilizing can
4 measuring cups
1 pan for syrup
1 wooden spoon
1 tablespoon
1 fork
1 lemon squeezer
1 saucer
2 coffee pots
1 tea strainer
1 punch bowl
punch cups
tea set
after dinner coffee cups and saucers
3 trays
spoons
1 finger bowl for demonstration
2 plates
1 spatula

Sixteenth Demonstration.

Salads.

Important Points in Salad Making.

- 1. The green vegetables should be served fresh and crisp.
- 2. Meat and fish should be well marinated and cold.
- 3. The ingredients composing the salad should not be combined until the last moment before serving.
- 4. Salad materials that are cut should be neat and symmetrical in shape.

Uncooked plants, fruits, nuts, and cooked vegetables and meats are used for salads.

Mayonnaise Dressing that is used for the salad is usually largely composed of olive oil. A small amount of yolk of egg is used as a foundation. The oil, with the addition of condiments, is slightly acidulated with vinegar and lemon juice, one or both, and the whole is made very light and thick by beating.

French Dressing.

(For uncooked or cooked vegetables and for marinating cooked salad materials.)

1 tsp. of salt

1/2 tsp. fresh ground pepper.

a few grains of cayenne

12 tablespoons of oil

4 to 12 tablespoons of lemon juice or vinegar.

Mix the pepper and salt, then add the oil and when the salt is dissolved or taken up by the oil sprinkle this upon the prepared salad, then turn the leaves over and over and finish with the lemon juice or vinegar.

The quantity of acid used depends upon the variety of salad and individual taste, but a salad is not intended for an acid dish. The acid flavor may be made more pronounced by adding

the acid first (instead of the oil) with the condiments and the oil last.

Whipped Cream Salad Dressing, for Fruit Salad.

- 1/2 c. vinegar
- 1 tsp. butter
- 3 egg yolks
- 2 tsp. sugar
- 1/2 tsp. salt
- spk. cayenne

(May or may not use 1/2 tsp. mustard.)

1/2 c. whipped cream.

Beat the egg until thick and lemon colored.

Add sugar, salt, mustard and cayenne pepper.

Pour over this mixture slowly, the hot vinegar in which the mustard has been added. Cook if necessary over hot water until thickens. Chill and just before using add the whipped cream. This recipe altogether makes 2-1/2 cups salad dressing. One cup salad dressing (scant service) will serve twelve people. Usually one cup is used for eight people.

While this salad dressing is cooling, the vegetable salad may be made.

Stuffed Tomato Salad.

Peel small tomatoes and cut out the hard pieces around the stem ends, to make tomato cups. Sprinkle inside lightly with salt and pepper, and fill with equal portions of celery and walnuts, cut in pieces and mixed with mayonnaise dressing. Serve on lettuce leaves, and garnish with curled celery.

The English walnuts were previously prepared for salad. In preparing vegetables for a salad, they should be thoroughly washed and the discolored leaves removed. Each leaf should be

looked over carefully on account of the insects that live on them. The vegetable may be made crisp by letting stand in very cool water, to which a little lemon juice or vinegar has been added, for about a half an hour. Remove from water and dry between folds of soft cheesecloth; then let stand exposed to the air a few moments. This careful drying is necessary, as oil and water do not commingle and a salad should have each individual leaf or bit of vegetable coated with oil or appropriate dressing.

Olive oil is a form of fat that, eaten in moderation, agrees with almost every one: It is strengthening and acts as a lubricant to the alimentary tract, and acts as a germicide. (The celery has been soaking in cool water for one-half hour, so was crisp enough for salad.) This salad may be passed as soon as made.

Banana Salad.

Peel banana, sprinkle with lemon juice to prevent discoloration.

Roll banana in ground peanuts or English walnuts. Lay on lettuce leaf. Add salad dressing and serve.

The English walnuts have been ground and the salad dressing is all ready but the whipped cream. The cream should be at least twenty-four hours old and should be thoroughly chilled to whip well. It should be about thirty or thirty-five per cent cream; at least no thinner than that. It may be whipped with a dover egg beater in a bowl but a cream whip is preferable. In using the cream whip there is no danger of splattering the cream and the whip is easily washed.

The cream must be closely watched while it is being whipped or it might go to butter.

Now the cream may be folded into the salad dressing and

served with the salad.

Salad dressing used with any starchy food, as banana or potato should contain but very little acid. The acid hinders the digestion of the starch in the mouth.

A salad may be served before the meat course, with the meat course or following it. If a fruit soup follows the meat course, the salad may follow that.

Many salads do not contain much nutriment, - as celery or lettuce, but are valuable in the diet as a relish.

Utensils used.

- 3 teaspoons
- 3 tablespoons
- 3 bowls
- 2 measuring cups
- 1 saucer
- 1 cream whip
- 1 egg beater
- double boiler
- 1 paring knife
- pan
- 4 plates
- 1 finger bowl
- forks
- 1 tray
- 1 spatula

Seventeenth Demonstration.

Fruits.

Fruit Salpicon.

Fruit salpicon is a mixture of fruits in a flavored syrup.

To be served in individual glasses, in a pineapple, melon, or in an orange or grape fruit peel.

Recipe.

1/4 orange

1/4 banana

1 squeeze of lemon

Syrup to make sweet.

Other kinds of fruit are often used:- pineapple, dates, figs, cherries, plums, grapes, etc.

The salpicon should be chilled and served as the first course as an appetizer or as the last course as a dessert.

The syrup which will be put on the salpicon was made as the syrup made for the punch in a previous demonstration.

Blushing Apples with Orange Sauce.

Core two red apples and cook, without removing the skins, in boiling water until tender. Turn the apples often with a skimmer, that they may cook evenly. Remove to a plate, carefully take off the skins, and scrape off the red pulp adhering to the inside of the skins and replace it on opposite sides of each apple.

Reduce the water to a cup or less, add 1/3 a cup of sugar and the juice of an orange also the grated rind if wished; let simmer until a thick syrup is formed; pour this over the apples. Drop a spoonful of whipped cream on each, or serve the cream apart.

While the apples are cooking, the recipe for stewed figs may be dictated.

Stewed Figs.

Wash the figs thoroughly, cover with boiling water, and let cook until the skin is tender, adding boiling water if needed.

When about done a little sugar may be added. Let the syrup cook until thickened a little. Serve hot or cold with the breakfast cereal, or cold with plain, whipped cream, as a dessert.

Oranges with Powdered Sugar.

Hold the orange on a fork. Peel with a sharp paring knife removing the pulp next to the skin. Cut out the sections of the orange, leaving the indigestible pulp. Arrange the pieces of orange in a circle on a small plate and put a spoonful of pulverized sugar in the center. This makes a very pretty, appetizing dish for either the first or last course. Strawberries on the stem, or slices of pineapple may be used in place of the orange.

Fruit with sugar is objectionable to some people, for it is liable to cause mal-fermentation in the alimentary canal.

Now that the apples are cooked they may be fixed according to recipe.

Fruits are very valuable in the diet on account of the large amount of water introduced into the system. Organic salts and acids are also valuable as they improve the quality of the blood. The carbohydrates are quite prominent in most fruits in the form of sugar.

Fruits have a more laxative effect if eaten between meals unless the fruit contains hard seeds which may irritate the stomach. In such a case it is better that the seeds be mixed with other food. If fruit is taken at the close of the meal, the water of the fruit may dilute the digestive juices too much and interfere with the digestion of other foods. The cellulose and seeds of the fruit cause it to be laxative. 'Tho' if the seeds are large and hard, they may cause constipation. If the fruits are very acid they should not be eaten at a meal with starchy foods.

Such fruits as dates, figs and bananas are nice for breakfast fruits. Pineapples, grapes, peaches, pears, apples, sweet oranges and berries may also be used.

The cream may be whipped for the apples and stewed figs and all the fruit dishes may be served at one time.

Utensils used.

- 1 paring knife
- 2 blue plates
- 1 apple corer
- 1 silver knife
- 1 skimmer
- 1 measuring cup
- 1 bowl
- 1 dover egg beater
- 1 tablespoon
- 1 pan
- 1 stew pan and cover
- forks
- 1 sherbet cup
- 4 small plates
- 1 tray with napkin
- 1 finger bowl for demonstrator
- 1 spatula

Eighteenth Demonstration.

Frozen Dishes.

Philadelphia Ice Cream.

- 1/2 c. thinned cream (33 to 40% cream)
- 1 tbsp. sugar
- 1/2 tsp. vanilla
- Few grains of salt.
- Mix the ingredients and freeze.

Instead of using rich cream, 1/2 milk may be used if desired.

The salt is added to bring out the flavor.

Philadelphia ice cream is one of the simplest creams made and one of the nicest.

If it is desired to have a cream flavored with a fruit juice, the fruit should stand in sugar to bring out the juice. Then mash with a potato masher. Then add juice to other ingredients and freeze. If it is desired to have the fruit in the cream, the fruit should not be added until the cream is frozen. If the fruit were added to the cream before it were frozen, it would be very indigestible.

An ice cream should be frozen with ice and salt, proportions 3 to 1.

If a finer grain is desired less salt should be used and it will take longer to freeze. If a coarser grain is desired the proportion may be ice 2 and salt 1.

If a small amount of ice cream, ice or sherbet is to be frozen;- the upper portion of a double boiler, a fruit jar or in the case of ice cream, a baking powder can may be used. The frozen ingredients should be scraped from the sides and stirred frequently so all will freeze alike.

Pineapple Ice.

1/3 c. shredded pineapple

1/4 c. cold water

1/2 tbsp. lemon

Allow cold water to stand over pineapple one hour.

Thoroughly strain. Add lemon and freeze.

If pineapple is raw add 2 tbsp. of sugar.

The water is allowed to stand on pineapple for the water

absorbs the juice.

Freeze by using 3 quarts ice to 1 quart of salt.

In packing use 4 qts. ice to 1 qt. salt.

Any other fruit may be used in place of the pineapple.

Lemon juice is always added unless the fruit has an especially fine flavor of its own.

The pineapple has been standing in the water for one hour and so is ready to strain.

Coffee Frappe.

Dissolve three-fourths a cup of sugar in a quart of clear black coffee and freeze. Serve in frappe cups or glasses with whipped cream as a garnish.

Frappes are served half frozen (an icy granular texture is preferred). Sugar is always used instead of syrup for sweetening. It should be frozen with equal proportions of salt and ice.

The coffee was made and cooled before the demonstration, so is ready for the frappe.

For freezing ingredients, the ice should be in fine pieces so it will more readily unite with the salt. The salt has a great affinity for water and in order to unite with it, it must first melt the ice then the salt goes into solution. Both solids are changed to liquids. This change requires a large amount of heat, and the heat is absorbed from the can of mixture placed in the ice and salt. Thus the ingredients in the can become frozen. The water should not be poured from the salt and ice until the ice floats in the water, as the melting ice and salt are colder than the mixture of salt and ice.

Frozen dishes are nutritious, especially those containing

milk, cream and egg. They are palatable and refreshing, and are especially valuable in hot weather.

Ice cream has a better flavor after it has been packed several hours.

The Philadelphia ice cream is now frozen just right to mould. It is still rather soft. Some tin moulds have been in a mixture of ice and water so they will be thoroughly chilled. They should be taken out and wiped quickly, then water should be poured in and out of the moulds so the ice cream will not adhere to the edges.

Put cream into moulds in layers so there will not be any air. The air will melt the ice cream. Cover ice cream with buttered paper with buttered side up. Place cover. Butter a strip of cloth and place around where the cover edge meets the can. The fat prevents any salty water from entering the can.

Place the can in a mixture of salt and ice. One part salt to four of ice. When ready to serve, wash the mould with cold water, to remove the brine, and wipe perfectly dry; take off the cover and the paper, invert the mould on a dish and, if the room be warm, the tin may be slipped from the ice in a few minutes.

The process may be hastened some by putting a hot damp cloth on the outside of the mould. Too much heat administered to the outside of the mould, causes the ice cream to melt too rapidly and the moulded cream to be unsightly.

The Pineapple Ice, Coffee Frappe may be served in sherbet cups at the close of lesson. The moulded ice cream may be served on a small plate. The ice cream may be surrounded with preserved strawberries.

Utensils used.

- 3 measuring cups
- 2 tablespoons
- 2 teaspoons
- 3 wooden spoons
- 2 upper portions of double boiler
- 1 pan containing ice and salt
- 1 dish for pineapple
- 1 dover egg beater
- 1 bowl for whipped cream for frappe
- 1 tin mould
- 1 pointed knife
- 1 spatula
- 1 pint Mason jar
- sherbet cups
- 3 plates
- spoons
- 1 tray and cloth
- 1 finger bowl for the one demonstrating.