

Cooking fresh meat. The flavors to be used with meat are a very important part of meat cookery, especially with tough meats. Dried herbs help to make meat dishes savory. Onions, carrots, turnips, celery, cabbage, in small portions, give a fine flavor. Spices, such as cloves, mustard, or even nutmeg, used in small quantities, also add to the savoriness of cooked meat; a little acid like lemon juice, or currant jelly, put into a soup, or stirred into a gravy, helps very much.

Broiling tender chops and steak.

Never spoil your tender meat by frying it hard with a large amount of fat.

Broiling over coals. Wipe meat with a damp cloth. If a wood or coal stove is used, have a bed of glowing coals ready. If gas is used, have the gas broiler thoroughly heated. Grease the bars of the broiler. Place meat in the broiler and sear meat first on one side, then on the other. Continue to turn the broiler, and cook the meat until it is brown and done according to taste. Steak an inch thick will take about ten minutes to be cooked to a medium degree. Chops are broiled in the same way.

Pan broiled. Here we use just enough fat to keep the meat from sticking. An iron frying pan is the best utensil. Heat the pan and brush it over with a small piece of fat cut from the steak or the chops. The purpose of this is merely to keep the meat from sticking to the pan. The principle of cooking is the same as with broiling over coals. Turn the steak or chops frequently, using a knife and a fork, but being careful not to prick the meat with the fork. The length of time is slightly longer than for broiling. This method must not be confused with the frying of steak in a pan with a large

amount of fat. This does not fry the steak, and is often a convenient method.

Roasted meat. This is a rule for tender meats. Wipe roast with a damp cloth. Sprinkle with salt and dredge with flour. Place in a roasting pan, fat side up if it is a standing roast. Put the roast in a very hot oven, and after fifteen minutes reduce the heat. Baste roast two or three times with the fat that tries out during cooking. The usual allowance of time for a medium rare roast is fifteen minutes for every pound of meat.

Roast beef gravy. After the roast has been taken from the pan, pour out all but $1\frac{1}{2}$ tablespoonfuls of the melted fat. Stir in 1 heaping tablespoonful of flour and brown very slightly. Add one cup of cold water and stir constantly until thickened. Add $\frac{1}{2}$ teaspoonful salt. Strain.

Round steak. Ask the butcher to cut it an inch or an inch and a half thick. A pound of round steak cooked in this way will give good-sized portions to three people. Wash the steak off with salt and water. Heat a deep frying pan, and melt enough beef suet to just cover the bottom. Make the pan very hot and brown the steak first on one side, then on the other. Remove to a cooler part of the stove, or turn down the flame, if it is a blue-flame oil stove. To a pound of steak allow 1 teaspoonful of salt, $\frac{1}{2}$ an onion chopped. Cover the meat with water, put a cover on the pan, and let the steak simmer for two hours. This is perfect when cooked in the Atkinson cooker all the morning. You may make this more savory by adding a little of several kinds of vegetables.

A pot roast or stew. For this select a large, solid piece of meat from rump or round. The method of cooking is in principle just like the cooking of the round steak, only the piece of meat is larger. The meat is browned all over in fat and put in the kettle. Suppose you have a 5-lb. piece of meat. Put in the kettle with it two or three carrots, a small turnip

or two, two or three onions, and a few stalks of celery or celery leaves or celery salt. The flavor is improved by a few cloves, say $\frac{1}{2}$ dozen. Add water and cook very gently for from 4 to 6 hours. This is another kind of dish that cooks well in the Atkinson cooker. When you are ready to serve the beef, take it out and put it on a platter and keep hot. If the water has not boiled away enough, let it cook a little longer, and thicken with a little flour. If you have a pint of gravy, you will need a tablespoonful of flour. Stir a little cold water into the flour, and stir this paste gradually into the hot liquid. Let it boil up and serve it with the meat.

Old-fashioned meat soup. Everybody says that Grandmother Stark can make the best soup in Pleasant Valley: and she has not any rule! You will find recipes for making soup in all the cook books, but this is Grandmother Stark's method. She uses meat bones or chicken bones and any pieces of cold meat that are left. She cuts up the larger pieces of meat and puts them to one side. She breaks up the bones, puts them in a kettle, and covers them with cold water. The kettle stands on the stove all day long, simmering gently, and from time to time Mrs. Stark adds a little more hot water. When the soup has simmered until the bones are bare, they are removed. Then Mrs. Stark looks in the pantry and refrigerator, and adds any cooked vegetable that is left, and a little stewed fruit, if it is not too sweet. When she is asked what she uses, she says, "Just whatever I find." Sometimes she adds a teaspoonful or so of dried herbs or a few cloves. If the soup is a little thin, it is thickened with flour, but

when cold mashed potato or beans are added, no other thickening is needed. Just before serving, the larger pieces of meat are added and, if there are not enough of these, cooked vegetables like carrots, turnips, beets, or whole peas and beans. Served with bread this makes a good dinner or supper for any cold day in winter. It is not a summer dish because it needs a long, slow cooking. It can be made in an Atkinson cooker, but not so well in a fireless cooker. You may think that you would not like it; but try it some time and see.

EXERCISES AND PROBLEMS

1. Why is meat a more expensive food than beans?
2. Why is it better to eat meat only once or twice a day?
3. Make a list of the cost of different cuts of meat in your own home place. Study cost of canned meats (page 298).
4. What is a meat substitute? Make a list of those that you can use at home. Write recipes for tough and tender fowl.

LESSON 24

FRESH VEGETABLES

How may we have fresh vegetables and use them to best advantage?

It is always a happy moment with Marjorie Allen and her brothers and sisters when the first crisp heads of lettuce, tender green peas, and succulent sweet corn are ready for the table.

The home garden. Mrs. Allen, Marjorie, and the children plant their own garden, and with a hand

machine keep it well cultivated. It is fenced in by wire netting and laid out in convenient beds with



Courtesy of New York State College of Agriculture at Cornell University.

FIG. 97.—Mrs. Allen's garden has a border of rudbeckia.

by cultivation. If you have running water and a hose, you are indeed fortunate. But sometimes it pays to carry water. Use a pail on a wheelbarrow, and, if the water supply is low, take slops from the house, diluted

narrow paths between, and with bright annual flowers making a gay border. Mr. Allen has the garden plot plowed and harrowed in the spring, and runs the cultivator through a few times in the course of the season. For fertilizer they use sweepings from the henhouse and wood ashes, except with the potatoes. Besides, Mr. Allen gives them a share of his acid phosphate. They also work into the soil decayed leaves and vegetables, which give the material that most soil needs so much.

Watering the garden.

This is the problem in dry seasons and soils. Remember to keep a blanket of dry earth around the plants

with clean water if the slops are strong with soap and washing powder. One bright girl, a member of a canning club, put an empty tin can with holes in the lower part in the ground near the roots of each tomato plant, and kept each can full of water. She was amply paid for her trouble by the large crop of the fruit in a dry season.

Planting in succession.

One can have each kind of vegetable lasting over a period of several weeks, by planting early and late varieties of the kind, and by planting several times. This more than pays for all the trouble.



Courtesy of New York State College of Agriculture at Cornell University.

FIG. 99.—Marjorie Allen learned to wrap paper around a seedling to keep off cutworms.

body has suggested farming as a moral substitute for



Courtesy of New York State College of Agriculture at Cornell University.

FIG. 98.—The tools Mrs. Allen and Marjorie found necessary for making and cultivating their home garden.

Plant insects and diseases. Watch for them above ground and below. Send for advice to your State College. Letting things go is ruinous in the end. Somebody

war. Do you understand what this means? Ask your father's opinion of this.

What shall we have? Study your seed catalogue and try new kinds. Lettuce, spinach, radishes, asparagus,

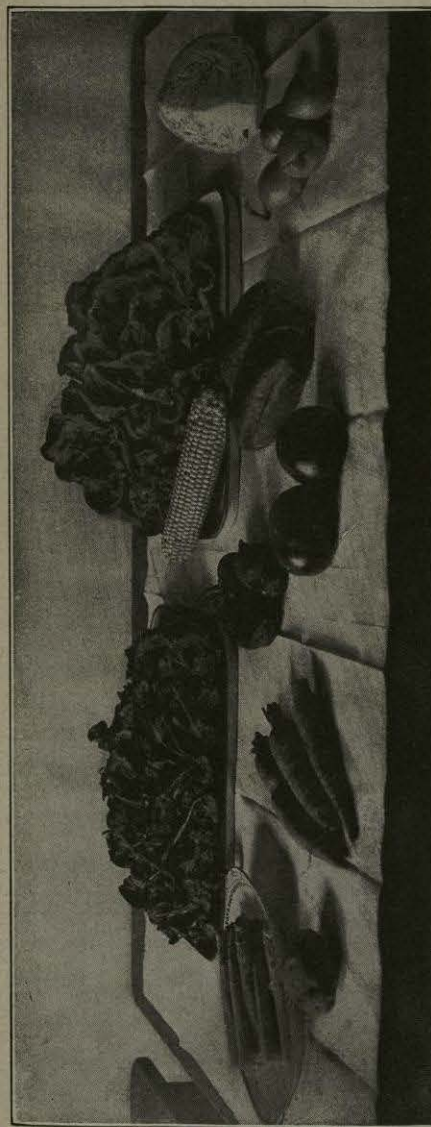


Courtesy of Mrs. Hetty Browne, Winthrop Normal and Industrial College.

FIG. 100. — The boys and girls with the teacher are making a school garden at the Oak Ridge School in another wide-awake town.

peas, beans (string and shell), summer squash, summer turnips, early beets, early carrots, tomatoes, cucumbers, sweet corn, lima beans, cauliflower, cabbage, — these are the staples, but there are still others. The winter vegetables need to be grown in larger quantity than you can manage alone.

Picking vegetables. Gather green vegetables as near the time of cooking as possible. In hot weather



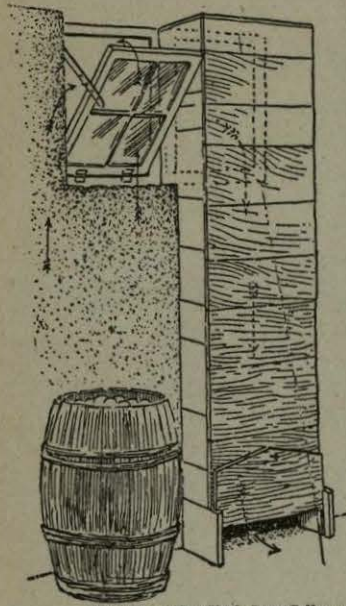
A. Fowler, Photographer.

FIG. 101. — 100-Calorie portions of vegetables.¹

KIND	WEIGHT OF PORTION, OUNCES
Asparagus	16
Beets	10
Cabbage	13
Carrots	10
Corn	9
Cucumbers	20
Lettuce	22
Onions	8
Potatoes	5
Spinach	15
Tomatoes	15

¹ See Lesson 28.

it is pleasant in the cool of the day after supper to gather them for use next day, however. Peas and beans can be picked in the evening, shelled and prepared. Potatoes and root vegetables do not lose freshness at once. Lettuce, spinach, and cucumbers should be put in cold water immediately. If cucumbers are pared and sliced, or cut lengthwise and put in salted water, they seem to become more digestible for some people.



Courtesy of New York State College of Agriculture at Cornell University.

FIG. 102. — Fruit and vegetables keep firm and fresh for a longer time if stored in a cellar ventilated in some simple way like this.

etables that do not easily spoil. You need a dry storage place, above the freezing point, yet not too warm. It is much better to have a storehouse dug into the ground for this purpose than to keep many vegetables under the house. If this cannot be, partition off a part of the cellar for vegetables. In some way arrange to have air enter it when the weather is not too cold; and in

Storing winter vegetables. Hard squash, pumpkins, potatoes, carrots, beets, turnips, cabbages (also apples) —

what shall we do with these? You see, storing is a way of preserving for a time the veg-

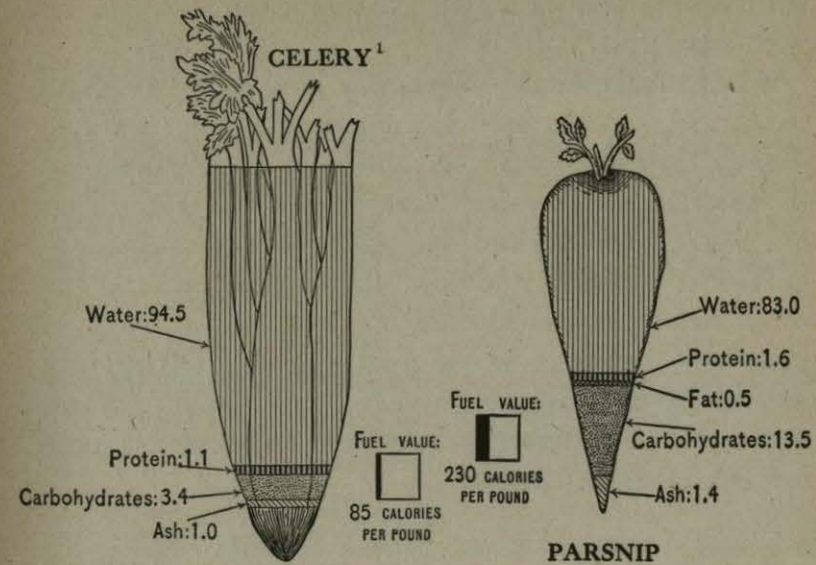
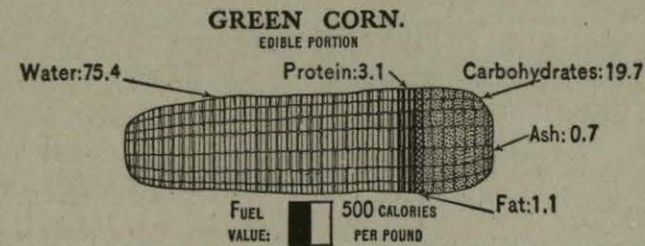


FIG. 103. — (a) Composition of celery. (b) Composition of a parsnip.



(c) Composition of green corn. Edible portion.

¹United States Department of Agriculture. Office of Experiment Station, A. C. True, Director. Prepared by C. F. Langworthy, Expert in charge of Nutrition Investigations.

early spring give it a "big" cleaning out, finishing off with whitewash.

What foodstuffs do vegetables give us? We may, indeed, look with pride upon the results of our working with nature, for each vegetable is a little storehouse of materials, taken from the earth, air, and water, that are sources of health and strength for us. Remember in particular the iron, the lime, the sulphur, and all the other minerals that Mother Nature has laid away so cunningly and that we so greatly need. Taking into account all the varieties, we eat every part of a plant, if not always the whole of any one—cauliflower is a deformed flower, you know.

The seeds	Contain all the foodstuffs. Well-developed peas and beans are rich in protein.
Roots and tubers (the potato) and the bulb (onion)	Contain all the foodstuffs. Small amount of protein and fat. Much starch or some form of sugar.
Rinds (squash and pumpkin)	Contain all the foodstuffs in small amounts. Mineral substances the chief value.
Leaves and stems	Very valuable on account of the mineral matter. Other substances in such small quantities that they are not important.

Make your own list in your notebook, putting against seeds all the seed vegetables that you know, and so on. Where will you put string beans? This list is useful in connection with that just given, because it will show you the chief food value of each kind.

If you have a good supply of many varieties, you will use less meat in summer. Eating vegetables is much better for you, and for your purse.

Eating vegetables raw. We can eat lettuce and some other green leaves raw. We enjoy crisp radishes, cucumber, and celery, and tomatoes and melons, which are "fruit" rather than "vegetables." Our work with these is to serve them clean and cool and to remove only the tougher outside skin.

How shall we best cook our vegetables? This story will amuse you. One day a mistress asked her cook to bring the meat soup from the refrigerator that she herself might prepare it for the dinner. The cook brought a bowl with a bone, bare except for gristle and a few dry strings of meat. "But where is the soup?" "Oh, ma'am, this is all the soup there was when I threw away the water!" But what has happened if you cook spinach in a kettle of boiling salted water and strain off all the water? You have left behind little more than the bones of the spinach, for in that water was lost the precious iron that you so much need. After such struggles to store up food material it seems a bit foolish to throw it away, does it not? "Shall we never boil vegetables, then?" Yes, sometimes, but not often. We will look into this a little further.

What does cooking do to vegetables? You know already what happens to the vegetable fiber and starch. Where there is protein the change in cooking is not very important. The heat does not change the

mineral matter, *but the water dissolves out the mineral substances to a large extent.*

What can you do then to save the mineral matter? One way is to use as little water as possible, and then use the water; that is, have only so much water that by the time the vegetables are tender there is so little liquid left in the bottom of the pot that it can be served with the vegetables. Perhaps this table will help you:

Bake when you can	Potatoes, squash, corn; even young beets, old beans, and peas.
Steam when you can	Any vegetable. In a steamer the cooking takes more time.
Stew when you can (This means so little water that none is thrown away.)	Spinach, celery, string beans, tender peas, and so on.
Boil in large quantity of water and throw away the water	Old, strong-flavored vegetables, because you want to be rid of the flavor—strong onions and cabbage.

Time-table for stewing, boiling, and baking.

Fifteen minutes. Tender cabbage and sweet corn. These are usually cooked too long.

Thirty minutes. Asparagus, peas, potatoes of medium size, summer squash, tomatoes.

Forty-five minutes. Young beets and carrots, onions, young parsnips, medium potatoes baked, sweet potatoes boiled.

One hour. String and shelled beans, cauliflower, oyster plant; winter squash, steamed or baked; young turnips.

Two hours. Old carrots, beets, and turnips.

Six to eight hours (or more). Dried beans, lentils, and peas, baked in the oven, with water added.

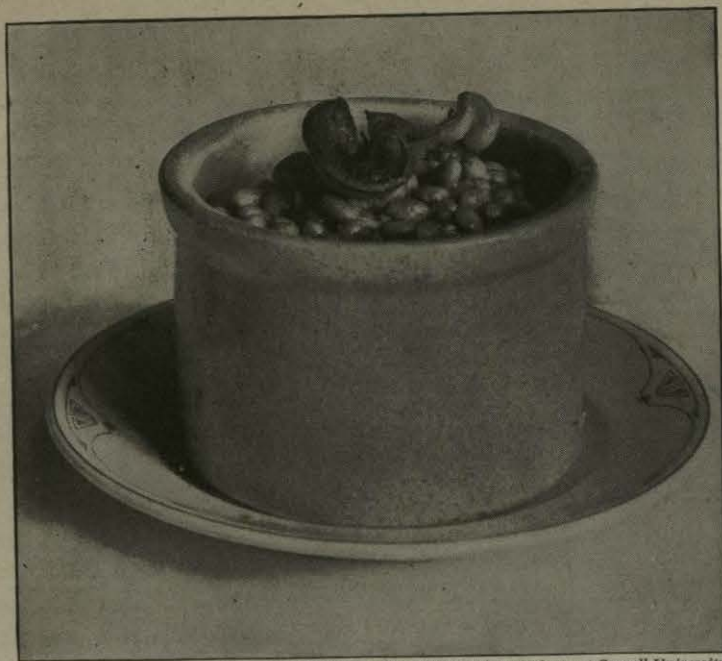
Stewed celery.

(A green vegetable.) Stalks of celery, too tough or coarse for serving uncooked, are delicious when stewed. The process is simple. Wash, scrape, and cut the stalks crosswise. Place them in a stewpan, barely cover with hot water, adding a teaspoonful of salt to a pint of celery. Cook gently for half an hour or until the celery is tender. Use the liquid remaining in making a sauce, adding some milk to make the necessary amount of liquid. Three fourths of a cup of sauce is enough for a pint of celery. (See page 64.)

Cabbage.

The method given makes cabbage a delicious and attractive vegetable, as delicate as cauliflower; and the odor in the kitchen is not noticeable.

Select a small cabbage, with the ribs in the leaves not too thick. Prepare the cabbage before washing it by cutting out the stalks from below with a sharp knife. Separate the leaves. Have ready the largest kettle available, nearly full of rapidly boiling water. Drop in one cabbage leaf at a time, pressing each one down with a long-handled spoon or skimmer. Do this so slowly that the water does not stop boiling. Leave the kettle uncovered, and allow the cabbage to cook from 12 to 15 minutes, depending on the thickness of the leaf stalks. Remove the leaves with a long-handled skimmer, putting them into a colander standing on a plate. *Immediately* pour the hot water down the sink drain, turn on the cold water to flush away the odor, and fill the kettle with cold water. While the cabbage is cooking, you have made a pint of butter sauce, adding a teaspoonful of salt, and have prepared $\frac{1}{2}$ cup of buttered crumbs. Cut the cabbage leaves slightly, placing them in a baking dish; pour the sauce over them, sprinkle the crumbs on the top, and brown the crumbs in the oven.



Courtesy of New York State College of Agriculture at Cornell University.

FIG. 104. — Baked beans. The beans are thoroughly cooked, but firm and whole.

Baked beans.

(A nitrogenous vegetable and a meat substitute.) This dish, known in old days in New England, was baked to perfection in the old brick oven. Baked beans seem difficult of digestion for some people. The mustard is supposed to be helpful, and adds something to the flavor. If the molasses is omitted, or but a small amount used, and if butter takes the place of pork or suet, the beans seem more digestible. In different parts of New England the dish is varied. Some people prefer rather dry baked beans; others wish them moist and very sweet.

What and how much.

1 quart of white beans
 1 teaspoonful of soda
 $\frac{1}{4}$ lb. salt pork or more, *or*
 4 tablespoonfuls of beef fat or butter substitute
 Molasses, from two tablespoonfuls to $\frac{1}{2}$ cup, *or none*
 1 teaspoonful of mustard

Utensils. A kettle. A covered bean pot.

How to make. Wash and soak the beans in cold water over night. Pour off any water that remains. Put the beans into the kettle, cover with cold water, add the soda, and cook gently until the beans are slightly softened. The soda aids the softening. Pour off the water again, and put the beans into the pot. Mix the molasses and mustard with a pint of water, and pour this over the beans, adding more water if the beans are not covered. Place the pork or other fat upon the beans, and cover the pot. If fat other than pork is used, salt must be added to the beans. The beans should bake slowly for from 6 to 8 hours, and even longer in a very slow oven.

Baked peas.

Save old peas from the garden and dry. Bake as for beans. They soften sooner than beans.

Vegetable soups.

When milk is used with the vegetable, you have a most nutritious dish. When made with milk, they are a good dish for a winter dinner or supper. We do not seem to need or want them so much in hot weather. Use them, too, for the school luncheon.

Your father and brother may think that they do not like soup at any time. Give them this soup some cold winter night, with small pieces of toast in it. The luncheon club had it at school one cold noon. Barbara Groves made it for the home supper.

Potato soup.

What and how much.

Potato	1 cup, mashed
Milk	1 quart
Flour	1 tablespoonful
Butter	1 tablespoonful
Salt	2 teaspoonfuls
Celery stalks, cut small	1 teaspoonful
Onion, chopped	1 tablespoonful
Pepper, cayenne	To taste

Remarks. If a thicker soup is desired, use more of the mashed potato. If celery salt is used, omit one teaspoonful of the salt. Less onion may be used, and the pepper omitted.

Utensils. Make the list yourself, after reading the directions for mixing.

How to mix. Boil and mash the potato, or use cold mashed potato. Heat the milk in the double boiler with the celery and onion. Add the milk gradually to the mashed potato, beating vigorously.

Put this mixture through a strainer into the double boiler, and reheat it. Melt the butter in a small saucepan, and stir in the flour; add *slowly* half a cup of the soup to the butter and flour paste; and then pour this slowly into the mixture in the double boiler, stirring all the time. The soup will be ready to serve in about ten minutes.

The important point in this recipe is the quality of the mashed potato. It should be dry and light. It may be made from hot, mealy baked potatoes. If cold mashed potato is used, this should be made light again with a fork. This amount will serve four to six people.

Dried vegetable soups.

Mollie Stark made a dried pea soup in their Aladdin oven, cooking the peas for some six to eight hours, and adding some

milk and seasoning at the end. Beans make excellent soup boiled with a little pork. It is impossible to give a rule for the amount of water or length of time. Water has to be added from time to time, and the beans can simmer on the back of the stove all day. The water can be allowed to boil away until the mass is rather thick, and the milk added just before serving.

Cream of tomato soup.

What and how much.

Tomato juice	$\frac{1}{2}$ cup
Milk	1 quart
Flour	2 tablespoonfuls
Butter	2 tablespoonfuls
Salt	2 teaspoonfuls
Bicarbonate of soda	$\frac{1}{2}$ teaspoonful
Pepper, cayenne	To taste

Remarks. Celery and onion may be added, but are not necessary. When you become expert, you will be able to use a larger amount of tomato juice, and even to omit the soda.

How to mix. This you will be able to work out for yourself. First perform this simple experiment. Stir together a tablespoonful of stewed tomato and a tablespoonful of milk. What happens? Heat this mixture. What further do you notice? How may you best extract the juice from the tomato? You have noticed the effect of the acid tomato upon the milk. The soda is added to prevent this effect. Will you stir the soda into the tomato juice or into the milk? Will you stir the tomato juice into the milk, or the milk into the tomato juice? Will you cook the mixture at all? How long before serving will you mix the two? When will you add the butter and flour?

The important point in this soup is to prevent the curdling; so you safeguard the milk at each step.

Squares of toast may be served with any of these soups.