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COOKING IN THE VOCATIONAL SCHOOL

AS TRAINING FOR HOME MAKING

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PREFACE.

This bulletin deals with the teaching of cooking for home-making purposes in the day and evening classes of the vocational school. Throughout the bulletin "vocational school" will be used as a term which includes both industrial schools and household-arts schools.

Vocational schools include all agricultural, industrial, commercial, and household-arts schools the controlling purpose of which is to fit for useful occupations, and which deal with pupils above 14 years of age and below college grade.[1]

This discussion recognizes that vocational schools for girls are of two types:

(1) The industrial school, designed to meet the needs of the manual wageworker in the trades and industries and in the household.

(2) The household arts school, which fits for nonwage-earning occupations connected with the household.

In certain communities there are found schools attempting to give both kinds of instruction under one roof and within one organization. In such case, for the purpose of this discussion, each of these groups will be regarded as a "unit school"—one an industrial school, the other a school of household arts.

While the industrial school is mainly concerned with training girls to become wage earners in industry, it also gives its pupils more or less instruction in cooking for home making. In the school of household arts, cooking is a most important factor in the training for home making. The instruction given these two groups differs not so much in method or content as in the amount of time devoted to the subject.

It is the purpose of this bulletin to discuss the conditions which underlie the necessity for instruction in cooking, to define the aim of such instruction, and to offer suggestions that may be of service toward the final solution of the problem. At the same time it is recognized that the final solution will probably go far beyond any plans suggested in these pages. Section VI (p. 26) is intended to be of direct assistance to vocational schools contemplating instruction in cooking; it gives plans and estimates which have been employed for construction, together with a detailed list of equipment and utensils.

This paper is not concerned with the training of professional cooks, nor with training for the wholesale production of food as required in

[1] A tentative statement of principles and policies issued by the National Society for the Promotion of Industrial Education, February, 1913.

restaurants and bakeries. While this is a legitimate purpose of trade instruction in cooking, as yet there has been little or no demand upon the vocational school by workers wishing skill of this kind.

This discussion has nothing to do with the teaching of cooking in the prevocational or the continuation school, nor is it concerned with such instruction in the grades or in the high school, except as the method used in these schools is carried over into the vocational school and there used as one method of training girls and women for home making. Excellent work has been done in these schools by the methods commonly employed, and it is not the intention of this paper to enter this field either for the purpose of criticism or suggestion.

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COOKING IN THE VOCATIONAL SCHOOL.

I. HOME MAKING AS A VOCATION FOR GIRLS.

The education of the girl who comes to the vocational school is a double problem. It must include training in two distinct vocations, neither of which can be considered sufficiently permanent to justify neglect of the other. The training in either one of these vocations, moreover, is not adequate preparation for efficiency in the other.

As compared with the boy, the future of the girl admits of a variety of adjustments:

(1) She may, like the boy, go into the industry to remain as long as she is physically able.

(2) She may, and most often does, go into industry for a short period, variously estimated at from three to seven years, and then permanently become a home maker.

(3) Having left the industry for her own home, circumstances may compel her to return to wage earning.

(4) She may be under the necessity of serving in a double capacity, being compelled to support the home which she manages.

Every evidence goes to show that, while the girl may enter the trade, she is, in the majority of cases, at one time or another a home maker. In confirmation of this is her personal, if unconfessed, point of view that wage earning for her is but a temporary affair, which she will leave for a permanent position in her own home. If this home is to be a going concern, the woman who manages it must be trained for her work as thoroughly as the man who supports it.

HOME MAKING A UNIVERSAL TRADE.

In the number of persons employed it outranks all other trades in the country. The Government census, however, fails to recognize the housekeeper as having a trade, because under normal conditions she receives no wage. According to the last census returns there are in the United States about 31 millions of women over 10 years of age. Of these 31 millions 1½ millions are working in shops and factories and 5½ millions are employed in domestic service. Of the remaining 24 millions no accounting is given, since the majority of these women are engaged in home making.

Many people believe that these figures are exaggerated and that no count has been made of the woman who goes back into the industry or of the home maker who is also a wage earner. Even if this be so, these figures conclusively show that after all possible allowances have been made the total number of women engaged in wage-earning trades is small as compared with those actively engaged in home making. The demand for skilled workers in some of these trades is limited to the cities, and training for any of them is advisable only where the industry is so well developed as to insure a steady demand for labor. On the other hand, home making is a trade for every woman and the demand is universal.

THE STANDARD OF COMFORT IN THE HOME.

Another phase of the economic aspect of this problem of training the girl is the standard of comfort in the home as a factor in the efficiency of the worker. Some manufacturers, especially those employing unskilled or semiskilled labor, are finding that improvement in the quality of the service which they require must come, in part at least, through improvement in home conditions which make for the health and comfort of the employee. The standard of comfort, as determining the efficiency of the worker, depends largely on the proper selection and preparation of food. To improper rather than insufficient food is directly traceable many cases of undernourishment, with resulting sickness, loss of vitality, and consequent loss to the industry and to the worker.

In the average working-class family adequate returns are seldom received from the money invested in food. This is due to several distinct causes:

(1) Buying of foodstuffs which, through dirt, decay, or adulteration, are unfit for use.

(2) Use of food which alone or in improper combination does not supply nourishment.

(3) Ignorant or careless cooking, where digestibility, attractiveness, and food value are lessened.

(4) Careless and hurried serving, which makes no appeal to the appetite.

Another evidence of the necessity for a better standard of living in the home is the tendency in many industries, as shown by legislation and the activities of various social organizations, to demand for entrance to the industry certain health requirements. Manufacturers themselves are beginning to see the wisdom of this, and in some industries are demanding a health standard for continuance in employment.

WHY THE VOCATIONAL SCHOOL MUST TEACH COOKING.

The demands on the housekeeper are changing in their nature and are becoming more complex. She is less concerned than formerly with the production of raw material, for her work is becoming that of an assembler rather than of an elementary producer. Her position is best illustrated by the familiar story of the promised dinner which was to take a thousand men to prepare, and which proved to be the usual family meal—the work of the thousand men passing through the housekeeper's hands for final preparation. She stands between the manufacturer and the ultimate consumer. Sugar, flour, spice, and butter come to her ready for their final use; she is not responsible for production, but for selection from the varieties offered. To meet these demands requires training which shall develop not only skill, but judgment and discrimination.

Not only have the demands on the housekeeper become more complex, but at the same time the situation in the home itself has so changed that it is no longer fitted to train the girl to meet the new demands which will be made upon her. As the day has passed when a boy is successfully apprenticed to a trade, so a girl is no longer apprenticed to her mother. The passing of this home "apprenticeship" probably accounts in part for the great number of girls who have no knowledge of the simplest domestic work.

The fact that the girl goes into industry much more than formerly lessens the opportunity for home instruction. Where her wage is an important item in the family support, she often leaves school as soon as the law permits. There is also an increasing number of girls who work from choice in order to be free from home restraint and to obtain the semi-independence which even a small wage gives them.

There is a relaxing of home control in America, resulting in the girl participating less and less in the activities of the home. She is going outside not only for employment but also for amusement. This makes her interest in home conditions and her understanding of them proportionately less.

There is also an increase in a certain type of home, especially in large cities, in which there is no home life; in which all the women of the household work in industries where the hours are so long and demands on the strength so great that there is little time or inclination for the care of the home. Women of such households seldom know how to do women's work by efficient and labor-saving methods. Many of these women are of foreign birth or parentage. In their migration they have cast aside the standards under which they were bred or else have found these standards wholly unsuited to their new living conditions. They are further hampered by their ignorance of the language and of American foods and markets. They are victims of overcrowded housing conditions, which give neither the space nor the privacy necessary to well-ordered family life.

DIFFICULTIES OF TEACHING GIRLS COOKING FOR HOME MAKING.

In teaching cooking in the vocational school certain special difficulties are met at the outset. One of these is the lack of interest on the part of most girls. The trade school is dealing with girls from 14 to 18 at a period when their interest in home making is slight. At this age many girls are chiefly interested in dress and a good time, while many others have vague dreams of a future that has little to do with home making. Few girls are seriously interested in home making until later.

Lack of interest on the part of the girl is frequently accompanied by a lack of interest on the part of the mother, and consequent failure to encourage training, which seems to imply that the mother can not or does not give efficient instruction in her own trade. If the girl cherishes a vague hope that her own home making may be accomplished without physical effort on her part, she often has the unacknowledged support of her mother in looking forward to a marriage which will "better her condition."

Benefit from instruction in housekeeping is to the girl a deferred value and to her mind a doubtful one. In learning a trade, such as millinery or dressmaking, the economic pressure of needing money and of wanting the things which money can buy, together with a by-product of skill which she can turn to her own personal use and adornment, stimulates her trade interest. In the case of cooking she has no such interest to assist the learning process.

Lack of trade organization and of trade spirit make any kind of trade instruction difficult. Very little of woman's work has been standardized, and conditions in the home industries are especially chaotic. Factory legislation and the "eight-hour" law are needed in many kitchens. There is little system or organization in carrying on the work, and results, as in cooking, are often characterized as good or bad "luck." Housekeeping lacks the spirit and inspiration which come from teamwork. The woman who has been in industry misses the companionship to which she has been accustomed. She also finds herself without a tangible incentive to speed and quality of work.

Again, the ability to cook is something with which every girl is by tradition endowed. Theoretically she acquires this ability either by inheritance or instinct. No number of poor cooks seems to offset the belief that skill in this trade will always come at the call of necessity.

In addition to the difficulties already mentioned there exists a well-defined prejudice against "school-taught home making." This is in part due to the same ignorance which once looked with suspicion upon the "book farmer," but it is also due to the failure of instruction in home making to tie up with home conditions and to produce proofs of efficiency.

TENDENCIES MAKING FOR INCREASED EFFICIENCY IN HOME MAKING.

On the other hand, a number of new factors that have a direct bearing on instruction in cooking are already bringing about a change in attitude and a new understanding of the problem:

(1) The recognition of home making as a trade, which may be raised to the dignity of a profession, and therefore requiring adequate "trade" training.

(2) State reimbursement for courses which can give proof of increasing woman's efficiency in the home; the success of such courses tends to place this work in the same class as other State-subsidized trade instruction.

(3) The organization of cooking classes in vocational schools, where these classes are put on the same basis as other departments which must maintain trade standards of efficiency and whose product may be marketable.

(4) The increase in the cost of living, which is convincing many housekeepers that they must have a more expert knowledge of the materials with which they deal.

(5) The growing difficulty of obtaining paid service is also making domestic skill more necessary to the housekeeper for the maintenance of the home.

II. REGULAR SCHOOL METHODS AND "TRADE" TRAINING IN COOKING.

When the vocational school offers instruction in any subject that has been taught in the regular schools, it is not only under the necessity of providing instruction that shall be efficient, but often it must also show why this instruction can not be given by the methods already familiar and accepted.

As an aid to an understanding of the question, two kinds of instruction must be recognized and the difference between them clearly understood:

(1) Instruction whose aim is to develop appreciation.

(2) Instruction whose aim is "trade" training.

Instruction whose aim is appreciation is given as part of a general education and not primarily to develop productive capacity. In cooking such instruction is based on the theory that the desired knowledge can be best given by teaching underlying principles through a study of typical processes and materials. This training is commonly given on the basis of laboratory exercises, which are essentially imitative and illustrative; it does not employ the methods or assume the "shop" conditions of commercial practice. The members of the group to be served are selected by the ability to meet certain educational requirements—namely, to pass the entrance requirements of their grade or class.

The aim of "trade" training in cooking is to teach the subject in such a way as to give actual ability to do this work under home conditions in what might be called a professional manner; to give manipulative skill and knowledge of materials and processes as they have to do with the making of a "commercial" product. This training should be given under the conditions of the domestic industries and by such methods as shall fit the pupil for the demands that will be made upon her by actual household work. The group to be served should be composed of those who desire this kind of instruction and are able to meet the trade-school requirements as to age and elementary schooling.

When the vocational school is confronted with the problem of instruction in cooking, it is natural that it should turn to methods that are already established and familiar. For this reason it seems necessary at this point to go into the detail of the instruction, as to its fitness for vocational purposes. The following discussion, therefore, is in no sense an attack upon cooking as taught in the public schools, but merely a development of the special purpose of this paper as outlined in the preface.[1]

The accepted method of teaching cooking in the regular day school has usually been either by the "group method," where several pupils unite in the preparation of one dish, or by the "individual receipt," where each pupil has the complete experience, but in such small quantities as to destroy its value for practical purposes. In one the girl's experience is fractional, with no direct responsibility for results, while the other is a demonstration method adapted to laboratory conditions, but with little or no domestic value or vocational content. These methods owe their existence partly to the fact that under the given conditions disposal of the product is not a serious problem nor the expense of maintenance prohibitive.

The common method makes the unit of instruction soup, muffins, or salad, and very seldom reaches the normal consideration of the meal as a whole. In the same way the individual responsibility for napkins, silver, and dishes is given the girl, instead of the unit of the well-set table. This kind of specialization carried far enough might be applicable to a trade which had reached the specialized stage of factory development, but it is not applicable to a trade that is still carried on in the home.

Under favorable conditions a grade pupil devotes to cooking 2 hours a week, or a total of 80 hours a year. With this limited time it is necessary to confine instruction to representative processes, and only those processes that can be carried out in the lesson period. This time allotment may be sufficient for the subject when taught from the standpoint of appreciation; and for a study which is only

[1] P. 5.

one of five or six in a general education it is all that can reasonably be expected within the time limits of a school course. When cooking is to be practical training, however, the time must approximate that which the woman will spend in this work in her own home. It must be sufficient to give professional skill and a comprehensive knowledge of materials and processes.

Inefficiency of the work, whether due to improper equipment, incorrect methods or poorly qualified teachers, is usually attributed to the size of the class. This is a legitimate excuse, since these classes usually number from 25 to 30 pupils. This prohibits either individual or group instruction and necessitates mechanical methods of handling the classes—the pupils file into the classroom, each girl going to an assigned place and doing designated work according to a routine in which she is more or less drilled. A certain "action under direction" is made to take the place of individual initiative and responsibility. A girl can not be allowed to learn from her own experience if this will involve 25 others in the same mistake.

"Trade" classes should not be so large as to preclude individual instruction or to compel a girl to work under artificial conditions. A housekeeper handles her work in a certain routine, but it is an elastic routine imposed by the conditions of the job.

Among the teaching force in the regular schools may be found many women whose training is entirely academic and whose only contact with their subject is from a teaching standpoint. Their preparation for the work consists mainly of training received in domestic-science classes of schools and colleges.

When this work is approached from the "trade" rather than the cultural side, the necessity of "trade" experience for the instructor is obvious. She must be familiar with the conditions for which she is training the pupil and must possess the expert knowledge and skill that come only from actual experience.

The method of furnishing supplies is another instance of where the attempt to run this work on accepted school lines is detrimental to its efficiency as trade training. In the regular school system all supplies must usually be estimated, standardized, and requisitioned weeks in advance. This makes it necessary for the work to follow a fixed schedule, and no attempt can be made to serve a need calling for a variation in supplies. For example, the presence of a number of Jewish pupils might make it desirable to teach Kosher cooking, which could not be done with standard supplies. Again, it is impossible to take advantage of unusual circumstances, such as the unexpected cheapness of certain fruit for canning and preserving, or the demand for "hot-weather dishes," caused by an unlooked-for rise in temperature. This method of furnishing supplies will not admit of buying advantageously for the varying demands of a commercial

market. What is more important, under these conditions pupils can do none of the actual buying; they can have no direct contact with market conditions and no responsibility as to quantity and quality purchased. Furthermore, trade training can not be given with the extremely limited amount of material usually furnished for grade work. If individual work is to be done with these amounts, it is necessary to cook in extremely small quantities and sometimes to divide the preparation of even these limited portions between two pupils. These portions are too small for profitable experience. As an alternative to this the class is sometimes divided into workers and observers. Comment on this situation is unnecessary.

The most common method of providing for cooking in the regular school is by what is called the "individual equipment." The "horseshoe," hollow square, and detached tables are all familiar arrangements of this method, where each pupil has her own table space, with closet and drawer room for her individual utensils. These utensils are usually of a size especially adapted to the preparation of small quantities. Larger utensils are provided for use among several pupils, and there is more or less general equipment for class use. For baking, a gas or coal range sometimes supplements the individual gas burners. The result is an arrangement more like a school laboratory than a home kitchen. Such an equipment is adapted to conventional teaching conditions rather than to working conditions in the home, and can not possibly suffice for teaching cooking in the vocational school.

THE TEACHER.

The difference in the aim and purpose of these two kinds of training demands a different type of teacher. As has been previously stated, neither the training nor the experience of the usual teacher of domestic science has been such as to fit her for "trade" teaching. The teacher of cooking for home-making purposes in the vocational school should have for entrance into the work the following qualifications:

(1) *Trade qualifications.*—Experience in home making, such as could be obtained from actual housekeeping. Commercial experience in the preparation or marketing of food, such as would be obtained in a food salesroom, tea, or lunch room.

(2) *Technical qualifications*, such as knowledge of food composition and values, food manufacture and adulteration, chemistry of foods, physiology of digestion, etc., equivalent to that given in the usual normal course in domestic science.

(3) *Academic qualifications.*—Graduation from high school or its equivalent.

(4) *Teaching qualifications.*—Knowledge of aim, organization, methods, and problems of the vocational school and ability to teach the subject so as to meet its requirements. This training is not at present commonly given in normal-school courses.

(5) *Personal qualifications.*—The usual requirements of neatness and of attractive personality, liking for young people, and enthusiasm for the subject.

At present few schools are giving adequate preparation for all these requirements, and it is doubtful if certain qualifications can ever be obtained in the school alone. For some time, at least, the vocational school will be under the necessity of giving supplementary training to teachers after they have been admitted to service. Technical knowledge can already be had in schools better fitted for this purpose than the vocational school. The "trade" experience for the most part must be obtained in the "industry," and should be a prerequisite for service. Some provision must be made within the vocational school itself for further training in teaching after the teacher has entered the service and for contact with the home conditions of the pupil.

III. MARKETS FOR THE PRODUCT.

The product of the home kitchen is not commonly sold, but it must always be "marketable" in the sense that it must meet the demand of the consumer, both as to quality and cost. This demand is not standard, but varies according to the requirements and circumstances of individual homes.

The girl must have the knowledge and skill which come from the actual handling of material. If she can be put up against the necessity of making her product meet the test of a commercial market, she becomes at once responsible for quality, cost, and promptness of delivery. This market will also make it possible to give her experience in handling food in the variety and quantity required in the average home. The element of reality, moreover, will stimulate the interest of the pupil and give point to the teaching; for under these conditions the instruction, as well as the product, must meet the commercial test of efficiency.

The market selected has much to do with the success or failure of the instruction. The attempt to supply markets which do not give proper training is a common cause of inefficiency. This may be because the kind of food demanded is not that which is needed by housekeepers. For instance, ability to make the small decorated cakes which find such a ready sale in tea shops might be an interesting accomplishment for a housewife, but great skill in this is hardly essential to the preparation of family meals. It may also be found that supplying the market selected involves too much repetition and does not give the necessary variety. For example, a school lunchroom has a constant demand for sandwiches and cocoa, which are not important articles of home consumption. Again, a market may

be too limited to give pupils proper working habits—the housewife works under a certain pressure which demands speed and a division of attention. Too small an output will not make a sufficient demand on the pupil.

There are in every case difficulties to be met when the vocational school attempts to deliver a commercial product. These are more or less peculiar to the local situation and the individual school. In addition to these, the cooking department has handicaps of its own which are peculiar to the "trade."

(1) In case of error or failure the chance of recovery is small. A misplaced ingredient can not be removed, and it is impossible to take apart the product for another trial.

(2) Strict time conditions govern certain markets; products for these markets must be ready at a stated time with little if any leeway.

(3) All the products are of a perishable nature.

(4) In certain articles every minute between production and consumption lessens marketability.

(5) In almost no other market is the individual peculiarity of the customer such a controlling factor.

Which method of marketing the product is best adapted to the individual school can only be decided after a careful study of local conditions and consideration of such points as the following:

(1) Will the product required be such that from its preparation the pupils can get the kind and variety of training needed?

(2) Will the amount of product required be in proportion to the number and ability of the pupils?

(3) Will the time of delivery be such that the school schedule can be adjusted to meet it?

(4) Will the undertaking be a successful commercial transaction and escape charity, graft, and bankruptcy?

THE SCHOOL LUNCH AS A MARKET.

One of the most common markets is the school lunch. This is usually a proposition to serve moderate-priced food at, or near, cost. Aside from all question of its desirability as a market, one point to be considered is that it puts hot and nourishing food within reach of the pupils at a price which they can afford to pay.

As a market for a commercial product it has certain disadvantages. There is present the usual danger of exploiting the pupil, because the absolute necessity of having the product in condition to serve at a fixed time may too easily outweigh all other considerations. To supply food in such quantities as a lunchroom demands will give excellent training in "wholesale cooking," but it requires careful handling to meet this demand and still keep the family meal as the basis of instruction. Again there is the daily demand for certain staples that

are not of much importance to the housekeeper. To these three objections may be added a fourth—unless some special arrangements can be made, the school lunch as a market offers no opportunity for teaching table setting or service.

In spite of these difficulties, however, the school lunch can be made a desirable method of disposing of the product if the food and not the girl is adjusted to the market. The first consideration must be that the pupils who prepare the lunch are given the kind and variety of cooking needed in a home. They must not be held to the drudgery necessary to the preparation of food in large quantities. The ability to make 16 loaves of cake at once is of little value to the ordinary housekeeper. When this quantity is needed, 8 girls can be given this rule to double, or 16 girls can each make one loaf. Thirty pounds of fowl can be divided among several classes, every girl having the responsibility of dressing and cooking a chicken. The final destination of ham, corn beef, and fowl may be a sandwich by way of the meat copper, but out of this meat the pupils have had working experience with home quantities.

Distribution of work can be made after consulting the record of each class, so that every girl has a variety of experience, and only repetition will be necessary to gain skill and confidence. Heavy work that has to be repeated every day, such as slicing bread, making cocoa, and washing dishes, can be done by hired help and figured as part of the cost of the lunch to be covered by the selling price.

This plan has proved feasible in that it has given pupils cooking experience in quantity and kind that would have been impossible without a market for the product. It has furnished a market which is more entirely within the control of the school than any other that has been tried. This control of the market is an important factor, moreover, for it lessens the likelihood of exploiting the girl for the sake of a commercial product. It also increases the possibilities of shaping the demand to fit the product of which disposal must be made.[1]

TEA ROOM, FOOD SALESROOM, CATERING AS A MARKET.

Another commercial market for the product of the cooking classes may be secured by opening a public lunch or tea room. When pupils are being trained for commercial cooking, this affords a better opportunity for business experience than does the school lunch; but for the pupil who wishes cooking only as a part of her training in home making the lunch room and the tea room are open to certain objections. One of these objections is the amount of work involved that is with-

[1] This plan is in successful operation in the Newton Technical High School, Newton, Mass., the New Bedford Industrial School, New Bedford, Mass., and the Boardman Apprentice Shops, New Haven, Conn., and other places.

out direct bearing on home making. Another is that when catering to the public the pressure of producing both quantity and quality is such that all considerations of training are frequently sacrificed to the commercial product.

There are, however, distinct advantages in this method of disposal. The general trade has more money to spend than the pupil who patronizes the school lunch. This trade buys a meal rather than a supplement to food brought from home. The demand for substantial dishes is greater, with not so much call for sandwiches and desserts. This makes it possible to keep a better balance in the cooking, and to give the pupils more variety in meat, fish, soup, and vegetables—especially vegetables, for which there is a comparatively small sale in the school lunch room. There is an opportunity for table setting and service which is lacking where the trade consists of 3 and 5 cent orders served in large numbers.

When the school is not favorably located to secure the kind of trade desired, it will be necessary to rent space in the business section of the city, often at a distance from the school, in order to carry on this business. A departure of this kind introduces additional problems into the school management.

(1) Can the school handle sufficient trade to meet the rent and other expenses incidental to an undertaking of this kind?

(2) Can a sufficient number of teachers be had to care for a "scattered school?"

(3) Have any of the school faculty sufficient business ability to manage the proposed undertaking?

(4) How can work which is drudgery and not a legitimate part of the pupil's training be handled?

(5) What arrangements can be made for the time schedule, and, if necessary, how will transportation of the pupils between the school and the lunch room be provided?

(6) Service at the lunch room will call for long hours. What assignments can be made in justice to the pupils?

(7) Shall all pupils put in some time at the lunch room daily, or shall the work be done by pupils serving longer hours and a week at a time?

(8) Will it be possible to make a financial success of a lunch which is only open for business when the school is in session, or will it be necessary to make some arrangement for its operation on Saturdays and during vacation?

(9) If so, how can it be done?

In a general discussion of this kind no attempt can be made to answer these questions. They are offered to further emphasize what has already been stated—that no decision should be made as to method of marketing the product until after a careful consideration

of the local situation. The final decision in every case must be made on the basis of the conditions governing the individual school.

Another method of disposal which is often advocated is cooking for the food salesroom. The experience to be had from this market is limited, since it involves the repeated preparation of a few articles of food. The demand is chiefly for bread, cake, and pies.

Among the patrons of a food salesroom it is often possible to work up a trade in the jellies, pickles, and preserves which it is desirable that the pupils be taught to make. These articles form a product which it is not always easy to market at a profit in the school lunch. This is, however, a minor consideration. If the school produces a standard article put up in attractive shape, there is usually no difficulty in disposing of all that can be made through a local grocer.

When the school has under its control facilities for serving a number of people, and when these are in an accessible location, there will be numerous opportunities for catering for school organizations and local gatherings. This gives the pupils an opportunity to prepare food different from that which constitutes the bulk of their experience. It brings them in touch with the social life of the community and gives them excellent discipline in teamwork.

IV. PART-TIME CLASSES FOR HOUSEKEEPERS.

The teaching of cooking in the vocational school is not only the problem of training the 14 to 16 year old girl; it is also the problem of teaching the adult housekeeper. In every community there are women engaged in home making who have found that in certain ways they are not equal to the task they have undertaken. Their inefficiency is due to a lack of specific knowledge or skill. In the case of cooking, it may be that a housekeeper has found that there are certain things which her family want that she can not make well, such as bread, pie, or jelly; or perhaps she is not able to feed the family satisfactorily with the money at her disposal. Just as economic necessity brings the wage earner to the trade school to increase her earning capacity, so economic necessity may also bring the housekeeper to the school to direct her spending capacity.

Besides the young housekeeper who may find herself unable to meet the demands of her particular domestic situation, there is also the more mature housekeeper, whom the vocational school can serve. She, too, may not be able to meet certain demands of her household, or it may be that she needs help in adapting herself to changing conditions. Increase in the cost of the food material which she has been accustomed to handle has put it out of her reach. For instance, she can no longer afford to buy the only cuts of meat which she knows how to cook; or she hears of new methods and labor-saving devices of which she is ignorant, such as casseroles and the fireless cooker.

Both cases concern women who have had experience in the work for which they need instruction and are able to define their needs. A "general course in cooking," which may be adapted to the ignorance of the beginner, takes no account of the skill and knowledge these mature workers have gained by actual experience, and may waste their time on work in which they are already proficient. The general course also assumes that these women all have the same need of instruction, while actually there are only small groups with a common need. Housekeepers of the kind described are ready to give their time and attend classes in cooking, if they have any assurance of learning the particular thing or things they wish to know. To secure the attendance of a housekeeper of this type, the vocational school must organize its work in a large variety of short units to meet her needs, arrange the sessions of the classes to meet her convenience, secure a teacher in whom she will have confidence, and then bring these classes to the attention of the woman who is very much confined within her own home. The short-unit course is the kind of instruction needed for this work. Such a list of unit courses for housekeepers as will be found on page 23 is only suggestive; these may be repeated, duplicated, and extended according to the demands of the individual situation.

Attendance can be secured for both day and evening classes in cooking. The housekeeper differs from the wage earner in that to a certain extent she controls her own time; her work can be adjusted to admit of more or less absence. This makes afternoon classes for the housekeeper not only possible, but in many cases most desirable. In some instances she finds it more convenient to attend evening classes. This is especially true of the housekeeper who is also a wage earner.

A successful teacher of these classes must have a personality which inspires respect and confidence in these women; she must be a person to whom they will go individually for advice. There is not as great a necessity here for commercial experience as for a wide domestic experience in all kinds of home cooking. For certain special work, such as Italian or Kosher cooking, a teacher may be needed who knows the language or is of the same nationality as her pupils.

Bringing these classes to the attention of the women who will be benefitted by them is a question of judicious advertising. Posters are of little value for this purpose, as they do not go into the home. The newspaper will reach a certain type of pupil, but in other homes it is never read by the women of the family. One of the most effective methods is the circular or circular letter sent through the mail. Mailing lists can be made up from the membership rolls of organizations patronized by the women the school wishes to enroll. Many labor unions have declared themselves in favor of home-making instruction for women, and in some instances have shown interest in placing this

information in the hands of wives and daughters of their members. These circulars must be a very clear and simple statement of facts. At the risk of repetition, they should answer all possible questions in regard to the classes. The circulars below have been used for this purpose and are inserted to show what information it has been found necessary to give.

COOKING AND SEWING CLASSES FOR WOMEN OF .....

(A) At the Girls' Department of the Trade School.

When: If there is sufficient demand, it is planned to open these classes January 5.

Where: At the Girls' Department of the Trade School, 79 Broadway.

For whom: These classes are opened to any woman or girl over 16 years old who lives in the city of .....

Cost: These classes are free.

Session: Each class meets once a week from 3 until 5 o'clock. The number of lessons is given after each subject.

Product: For the dressmaking classes you bring your own material and have what you make. The school furnishes the material for the cooking classes, but you can have what you make by paying what it costs. The classes in expert cleaning and fine laundry work will give you a chance to cleanse your own clothes.

Teachers: These classes will all be under the charge of women who are experts in the work they teach.

Registration: To register, fill out the attached blank and mail to the Trade School, 79 Broadway. Additional blanks may be obtained at this office. A woman may register for any one of these courses or for more than one if she wishes. Admission to all these classes is limited to 15 to 20 pupils; the preference will be given to those who register first; so *Register at once*. You will be notified by mail if your application can be accepted and the date on which the first meeting of the class will be held. No class will be opened unless there are at least 15 applications for instruction in that subject.

COOKING FOR HOUSEKEEPERS.

	Lessons.
1. Yeast bread, biscuits, and rolls	6
2. Baking-powder biscuits and breakfast cakes	6
3. Pastry	6
4. Cake	8
5. Desserts	10
6. Breakfasts	5
7. "Dinner-pail" lunches	8
8. School-children's lunches	8
9. Sunday-night suppers	6
10. Simple family meals	8
11. Cooking for infants and invalids	8

SEWING FOR HOUSEKEEPERS.

	Lessons.
12. Shirt waists	8
13. Fancy waists	12
14. Skirts	12
15. Unlined dresses	16
16. Underwear	10
17. Baby clothes	12
18. Children's clothes	16
19. Household sewing (bed linen, table linen, etc.)	8
20. Mending and repairing	8
21. Use of sewing-machine attachments. Can you use the tucker, ruffler, hemmer, and binder which belong to your sewing machine?	6
22. White embroidery	10
23. Embroidery for gowns	10

CLEANING AND FINE LAUNDRY WORK FOR HOUSEKEEPERS.

	Lessons.		Lessons.
24. Washing blankets and flannels	4	27. Removing stains	4
25. Laundering shirt waists	4	28. Cleaning	6
26. Fine starching and ironing	6	29. Cleaning solutions	4

APPLICATION BLANK.

Date.....

Name....., Address....., Occupation .....

Courses desired (give both name and number).....

.....

(B) At the Housekeeping Center, 96½ View Street.

DO YOU WANT TO KNOW

HOW TO COOK
- MEAT?
- VEGETABLES?
- SOUP?
- BREAD?
- CAKE?

BREAKFAST?
- DINNER?
- SUPPER?

HOW TO SEW
- SHIRT WAISTS?
- DRESSES?
- SKIRTS?
- UNDERWEAR?
- CHILDREN'S CLOTHING?

HOUSEHOLD?
- SEWING?
- MENDING?

THESE CLASSES ARE FREE.
THEY ARE FOR YOU.

If you wish to belong, come and put your name in on *Thursday* or *Friday*, 26th to 27th, 3 to 4.30 p. m.

There is another class of women whom the vocational school can serve—the "prospective housekeepers." This class is made up of two groups—one, house daughters who have finished their regular school training, and the other and larger group, young women who are in various kinds of employment during the day. All these young women have an immediate prospect of homes of their own, and to them benefit from cooking instruction is no longer a deferred value. While the girls in this group are more mature than the regular vocational school pupils, their basis of experience is limited as compared with the housekeeper and their need of instruction is

general rather than specific. The short-unit course is also the best method of teaching these girls, but the units should be organized with more regard to the preparation of meals than of single articles of food. These courses should be given in day and evening classes according to the demands of the registration. This registration may be secured by the mailing of circulars and also by posters placed in stores, factories, and offices where women are employed.

SAMPLE UNIT COURSES FOR PART-TIME AND EVENING CLASSES.[1]

The following are sample unit courses which may be used for part-time instruction in home making for housekeepers. These courses are only suggestive, and this is in no sense a complete list of work which might be given in this subject. The courses themselves and the number of lessons in each should be arranged to meet the needs of the pupils.

	Lessons.
1. Meat	8
2. Soups and stews	10
3. Left overs	8
4. Meat substitutes	16
5. Fish	6
6. Clams and oysters	5
7. Vegetables	8
8. Bread and rolls	6
9. Muffins and quick bread	5
10. Cake	8
11. Cookies	6
12. Cold desserts	6
13. Hot desserts	6
14. Frozen desserts	5
15. Pastry	6
16. Salads	8
17. Sandwiches	4
18. Eggs	4
19. Canning and preserving	12
20. "Dinner pails"	6
21. School children's lunches	6
22. Sunday-night suppers	8
23. Breakfasts	5
24. Fireless cooker and paper-bag cooking	6
25. Kosher cooking	10
26. Italian cooking	10
27. Infant feeding	5
28. Meals for children from 2 to 6 years old	5
29. Cooking for invalids and special diets	8
30. Marketing	6
31. Table setting and serving	4

V. TAKING INSTRUCTION TO THE PUPIL.

In the attempt to place instruction in cooking within the reach of all women, not only must local needs be studied and careful and systematic measures be taken to supply them, but in many cases means must be devised to take this instruction to the consumer.

In a city of any size distances are often prohibitive. A working woman has neither time nor strength to reach a distant class; neither can she always afford car fare. Instruction in cooking for this woman must be easily accessible. A number of small centers,

[1] Many of these short-unit courses are in operation in the evening schools of Rochester, N. Y., Albany, N. Y., Worcester, Mass., Lawrence, Mass., and many other places. An extended list of such places may be found in Bulletin No. 17 of the National Society for the Promotion of Industrial Education.

located where registration is heavy, will serve better than one large central plant. It has been found possible not only to open classes where they can be conveniently reached, but also to take instruction into places of employment and into the home itself. Special rooms for this purpose can often be fitted up at small cost in the basements of regular school buildings, and sometimes rooms well adapted to such work can be rented in convenient locations.

In one instance instruction was taken to the place of employment by using the "cookhouse" which a cotton mill had built for the purpose of preparing employees' dinners. The use of this building was secured for one night a week by the local vocational school. Posters were placed in the mill inviting the women employees to meet here and cook their own supper with the help of a teacher from the school. Two sample menus, with their cost, were given on this poster. Registration was taken through the foreman, and more women applied than it was possible to accommodate. At the close of the mill day as many women as could get into the "cookhouse" came directly from their work and cooked supper under the direction of the teacher. The mill furnished the kitchen and equipment, the school supplied the teacher, and the pupils paid the cost of material, which was never over 12 cents a person. This method of taking instruction to the pupil proved very useful. There was no falling off in interest and attendance, and the women asked to have the classes continued permanently. Two sample menus are given to show the kind of cooking in which these women were interested.

SUPPER No. 1.

Cheese pudding. Baked onions. Cold slaw. Peanut cookies. Coffee.

Cheese pudding	$0.48
Baked onions	.10
Cold slaw	.15
Cookies	.40
Coffee	.28
Fuel	.10
Total cost	1.51
For "family" of 14—	
Individual cost	.11

SUPPER No. 2.

Codfish in tomato sauce. Cereal muffins. Dried apricot shortcake. Cocoa.

Codfish in tomato sauce	$0.30
Muffins	.24
Shortcake	.20
Cocoa	.28
Fuel	.08
Total cost	1.10
For "family" of 14—	
Individual cost	.08

COOPERATION WITH THE HOME.

It is believed by some that the school will not reach an efficient method of teaching cooking until the instruction is given under actual domestic conditions in the home itself. Instruction in the schoolroom, it is maintained, can at best be made only an imitation of home conditions and, therefore, can never be thoroughly efficient.

In some instances, at least, instruction in cooking has been actually taken by the school into the home of the pupil. In one particular case 15 young women who wished to form a class volunteered the use of their home kitchens.[1] They had 10 lessons in the preparation of breakfasts. The class met at the homes of the members, and both cooked and served breakfasts planned for families in moderate circumstances. The pupils not only had the experience of cooking and serving these breakfasts, but of actually doing the work under the conditions of 10 different kitchens. The success of this particular class was largely due to the ability of the teacher in securing the cooperation of the pupils and a spirit of independent work.

While this was an evening class composed of girls employed during the day, the experiment is of interest and may be regarded as prophetic of home-making instruction in the future. At the present time no instance is known of the continuous and systematic giving of instruction in the home of the day-school pupil. As a move in this direction some schools have tried the experiment of giving credit to the pupil for work done in the home.[2]

In a few cases the school has gone a step farther in an attempt to utilize the home as a place of practice for the pupil. Different household tasks are gone over in detail as preliminary preparation, and practice is given in certain processes, such as making pie crust or planning a meal. The girl then does this work in her own home as a part of the family housekeeping, and brings to the school a written report signed by her parent to denote whether the service rendered has met the family requirements.

For a satisfactory working out of this scheme, it will be desirable for the school to be in very close touch with the families and home conditions of the pupils. The parent's signature to the written report is only one means of securing this cooperation, which must come largely through the teacher herself. For this purpose she will need to have time assigned for more or less direct supervision of the girl's home work. This supervision will generally take the form of friendly calls. Since these calls are to be made in that most inaccessible of places—another woman's kitchen—the success of this method will depend on the personality of the teacher and the tact and discretion which she can use in dealing with the girls' mothers.

The card reproduced below has been used to secure the interest and cooperation of the girl's mother. Credit is given for work done at home when that space is filled out and properly signed. In this way the mother may know what the girl is being taught in the school and what she may be expected to know when called upon to help in

[1] Wakefield Evening Industrial School, Wakefield, Mass.

[2] The following, among others: Boardman Apprentice Shops, New Haven, Conn.; Belmont, N. Y.; Sinclairville, N. Y.; Lowville, N. Y.; and Greigsville, N. Y.

the home. The teacher is also informed as to how much opportunity the girl has to put in practice what she is taught in the school.

COOKING RECORD.

Pupil..... Week ending.....

.....School.....Home.....

.....

.....

.....

.....

.....

.....

.....

Quality of work..... Quality of work.....

Attitude toward work..... Attitude toward work.....

Teacher's signature..... Parent's signature.....

There would seem to be certain objections to this practice. When a girl works at home she is very much under the influence of her mother's methods and example, and in some cases this is most undesirable. If the great part of her actual experience is to be in her own home, the experience will be limited to supplying the needs of a few people, and to the use of such utensils as the home affords. The equipment of the average kitchen is also a handicap. It is in most cases a hit-or-miss collection of utensils with which the housekeeper is already familiar, rather than the result of an intelligent search for those which will lighten labor. A woman will refuse a time-and-labor-saving device for no other reason than that it was not in her mother's kitchen. The school is prepared to give the girl a greater variety of experience with utensils and material than the average home can afford. When working in the school the girl learns from the experience of the other girls. The excited discussions carried on in trade-school kitchens are sufficient evidence that the pupils are quick to observe, and that they form their own opinions.

VI. THE KITCHEN AND ITS EQUIPMENT.

Much of the inefficiency of trade instruction in cooking is due to inadequate or unsuitable equipment. In some schools the laboratory equipment previously discussed has been adopted outright or with modifications. In other schools the cooking department has as its basis the home kitchen, but doubled or tripled in size and equipment

until it will accommodate 15 to 20 girls. In a few instances an institutional equipment has been installed with all the "machinery" for cooking in large quantities. Instruction given under any of these circumstances leaves much to be desired in efficiency and direct relation to the job for which it is supposed to train.

An important factor in training the girl "on the job," as has been previously stated, is to give her this training under conditions which are real; that is, under conditions which at least approximate those of the actual "job." It is these conditions which should determine the arrangement and equipment of the kitchen in the vocational school. In this connection it is a serious mistake to ignore a fundamental difference between home making and such other trades as millinery and power-machine operating, for instance. As compared with the conditions of employment in these industries, home making is carried on in comparative solitude. In other workrooms of the vocational school the conditions are normal; that is, they are essentially those of the industry where a number of women work close together in a certain partnership of interest. The mistaken attempt to carry this organization over into the cooking department results in a variety of arrangements, whereby a single kitchen is made to accommodate 15 to 20 girls. Under no circumstances can a kitchen equipped even for 15 girls be made a reproduction of home conditions.

The "job" for which the girl is to be trained is the home; therefore the school must approximate the "trade" conditions under which this work is commonly done. The kitchen, for example, should be about the same type as that found in the average home, and the equipment and utensils such as could be afforded by the housekeeper in ordinary circumstances. Can this be done under school conditions? How will it be possible to handle classes of sufficient size to prevent the cost of instruction from being prohibitive?

In the "unit" kitchen has been found a method which approaches the requirements of giving actual training under home conditions. By this method the home kitchen is made the unit of construction, the units being repeated as often as the number of pupils demands. These kitchens are small rooms like the ordinary tenement kitchen, and are furnished with sink, gas stove, and the necessary utensils. The equipment should be simple, planned to put the girl on working terms with the kitchen at home. The rooms are built with only three walls, the fourth side being open on the hall. By this arrangement one instructor can supervise the work in a number of kitchens. A class of 15 can be taken care of, each kitchen accommodating 5 girls, as in the New Bedford Industrial School, New Bedford, Mass., or in the Boardman Apprentice Shops, New Haven, Conn.

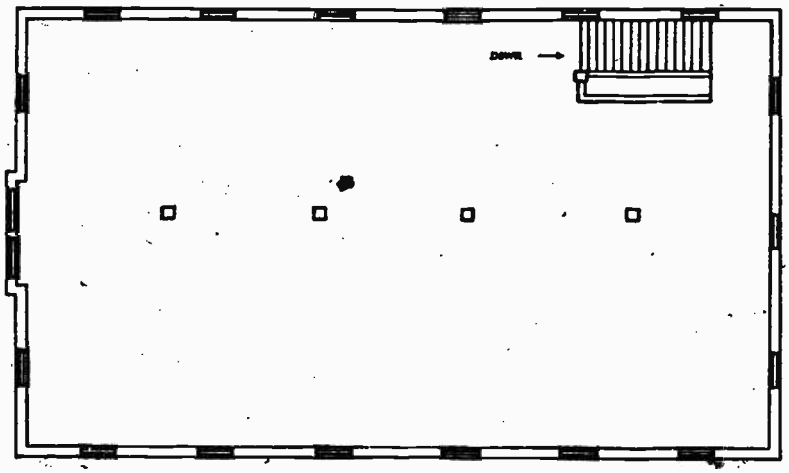


FIG. 1.—School No. 1. Space Utilized for Unit Kitchens.

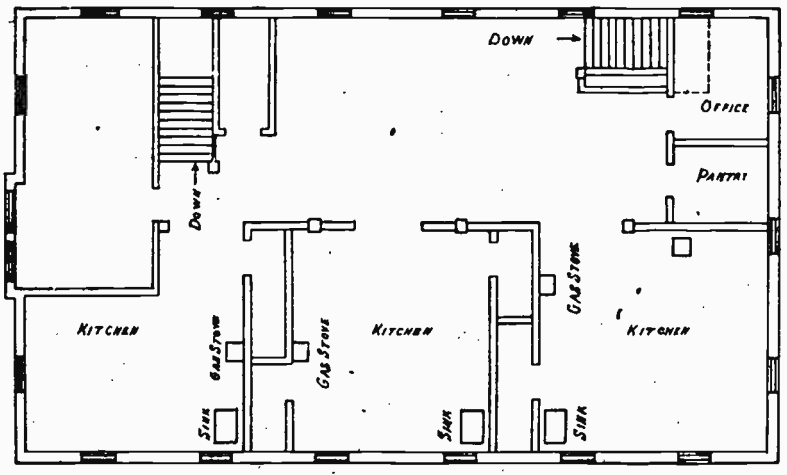


FIG. 2.—School No. 1. Floor Plans of Unit Kitchens.

This plan does not require a specially constructed building. Under present conditions the trade school is usually housed in any quarters it can get, from a factory to a dwelling house. Any plan, therefore, which is not adaptable to the most unpromising conditions can not be a real help in the solution of this problem. If a plan calls for extensive rebuilding, its usefulness is extremely limited.

Figures 1 to 4 show floor plans of two buildings where unit kitchens have been installed. The kitchens shown in figure 2 and plate 1 are on the third floor of a carriage storehouse, which is the building devoted to the girls' vocational school. Since this building was not regarded as a permanent location for the school, the work was done in the cheapest possible fashion. Light studding was put up, and the interior finish was wall board. All work except painting and plumbing was done by the boys' department of the school. This construction was cheap, attractive, and satisfactory. Figure 3 shows the floor space in a brick school building before it was devoted to trade-school purposes, and figure 4 shows how it was rearranged for unit kitchens. A more permanent and expensive construction was employed here with no particular gain in appearance or serviceability.

If these kitchens are equipped according to the suggestions in the detailed list, pupils will have much practical work in determining comparative desirability and cost of kitchen furnishings. For instance, three gas stoves were bought, but of three different makes; an iron sink was placed in one kitchen, a white enamel sink in the second, and a stone sink in the third; the refrigerators are also of different kinds. The same idea was followed in selecting the utensils; both glass and wooden rolling-pins are included in the list, and prices are given on enamel ware of three different grades.

The equipment given is the one used for the three kitchens shown in plate 2A. This with the restaurant equipment which follows, answered the purpose of this particular vocational school—to give training in cooking for home-making purposes to all girls in the school, and to women desiring part-time instruction by means of the unit course in day and evening classes; also to market this product in the school lunch room, where 150 people could be served. Other conditions would require variation in this equipment to meet peculiar needs. The specifications and prices are those of the city where the goods were bought. In every case prices on kitchen equipment are regular retail prices. Discounts obtained on quantity have been omitted. The costs of restaurant dishes, glass, and silver are the regular prices of a wholesale house dealing in hotel ware.

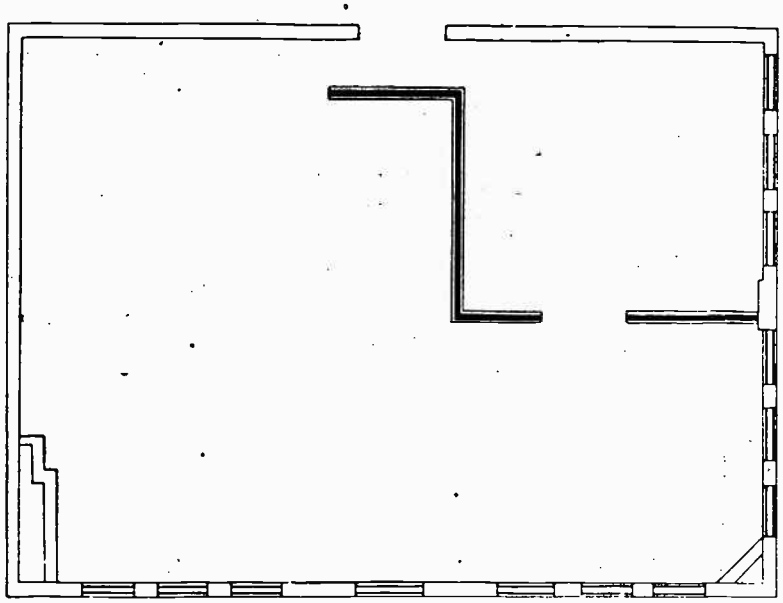


FIG. 3.—School No. 2. Space utilized for unit kitchens.

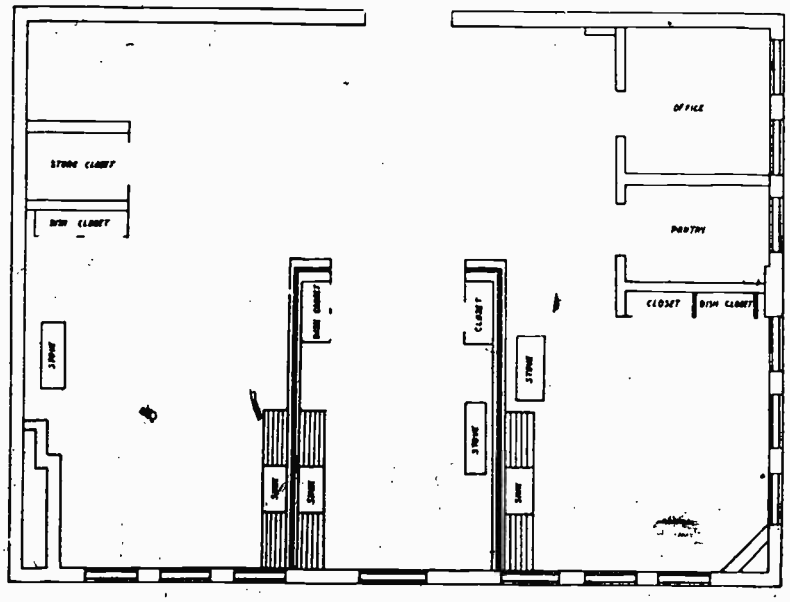


FIG. 4.—School No. 2. Floor plans of unit kitchens.

EQUIPMENT FOR THREE UNIT KITCHENS.

1. EQUIPMENT FOR COMMON USE BETWEEN THE THREE KITCHENS.

	Cost.
1 refrigerator	$40.00
1 refrigerator, white, all steel	47.00
2 refrigerator pans, galvanized iron, large size	1.50
1 clothes line	.75
1 wheeled table 30 inches high, top 3 by 2 feet, shelf 6 feet from floor, 2-foot rail around top and shelf, the wh[illegible] finished with spar varnish	$10.00
Total	99.25

2. STOREROOM EQUIPMENT FOR COMMON USE

	Cost.
12 drip pans, 17 by 12 inches	$4.80
6 pudding dishes, Guernsey ware, 9½ inches outside measure	2.40
6 pudding dishes, Guernsey ware, 10½ inches outside measure	3.36
12 crocks, with covers, 4-gallon	9.60
6 crocks, with covers, 2-gallon	3.60
1 teapot, earthenware, 2-quart	2.50
100 casseroles, red clay, 7-ounce, without covers, 4 inches outside	30.00
50 ramekins, Guernsey, white inside	3.50
24 custard cups, Guernsey, white inside	1.80
6 casseroles, Guernsey, round, with cover, 12 inches outside, No. 10	12.00
3 casseroles, Guernsey, round, with cover, 9 inches outside, No. 69	3.60
1 set measurers, 1, 2, 4, 8 quart, ½ bushel, bound, varnished, and sealed	$2.00
1 double roasting pan	2.00
1 North Pole ice-cream freezer	2.25
1 White Mountain ice-cream freezer	2.90
1 Alaska ice-cream freezer	2.68
1 bread cutter	4.00
2 cake closets, white japanned, 3 shelves	6.20
2 bread boxes, white japanned	4.50
1 bread mixer, 8 loaves	2.00
1 hammer, 8-ounce	.60
14 dozen glass cups, plain, with handle	7.70
1 coffee pot, copper bottom	2.50
1 stepladder, 4 steps	1.20
Total	115.69

3. EQUIPMENT FOR KITCHEN NO. 1

	Cost.
1 gas stove	$33.00
1 sink, Alberine stone, with back and cap, 36 by 22 inches, faucets and connections included	23.00
1 table, pine, 5 by 29 feet, with drawer	5.00
4 factory stools, 24-inch	2.07
WOODENWARE.	
1 mop handle	.35
1 towel rack, 5 arms	.15
1 set flour buckets, 3 in a set	1.95
4 pastry boards, 20 by 30 inches, cleated ends	2.00
1 chopping bowl, 12-inch, round, oiled	.25
1 chopping bowl, 14-inch, round, oiled	.50
1 rolling pin, 10 by 1½ inches, revolving handles	.25
5 doughnut cutters	.90
1 ham board, 10 by 14 inches	.30
1 dish rack, folding	.30
1 vegetable brush, 1½-inch, twine bound	.45
1 scrub brush, solid back	.20
1 potato masher	.10
1 cake spoon, 12-inch slit bowl	.24
2 cake spoons, 12-inch, solid bowl	.20
IRONWARE.	
1 fry pan, No. 7 size	.35
1 fry pan, No. 8 size	.38
1 griddle, medium size, with side handle, No. 8	.35
1 frying kettle, with basket	1.90
EARTHENWARE.	
3 nests of bowls, 5 in a nest (brown and white) Guernsey	7.35
1 platter, 12-inch white ware	.21
1 platter, 18-inch white ware	.54
2 pitchers, Portland style, 2½-quart	.80
GLASS.	
12 measuring cups, thirds and quarters	$1.20
4 lemon squeezers, lipped trays, No. 3	.40
2 glass rolling pins, 12 by 3 inches	.90
2 jugs, 1-gallon	1.00
8 jars with flat screw tops, 1-quart	.80
8 jars with flat screw tops, 1-pint	.80
1 butter jar, flat top, medium	.30
CUTLERY.	
6 spatulas, 6-inch tinq, riveted in handle	3.00
8 case knives, medium	.84
8 forks, three prong, medium	.84
6 vegetable knives, riveted handle	.90
6 vegetable knives, ferrule driven in handle	.60
1 center-cut bread knife	.50
1 butcher knife, 6-inch	.35
1 bread knife, 8-inch	.45
1 mincing knife, 2 tings in handle	.35
1 flesh fork, wooden handle	.25
1 ice pick, 6 inches long	.10
4 knives, Lasher silver	.66
4 forks, Lasher silver	.46
1 steel for sharpening	.80
SPOONS.	
2 sets aluminum measuring spoons ¼, ½, ¾	.40
1 aluminum spoon, 13 inches long	.35
1 aluminum spoon, 16 inches long	.40
12 teaspoons, Lasher silver	.65
8 tablespoons, Lasher silver	.94
AGATE OR ENAMEL WARE.	
1 teakettle, seamless, 5-quart	1.10
1 saucepan, 2-quart, lipped	.25
1 saucepan, 3-quart, lipped	.35
1 saucepan, 4-quart, lipped	.40

3. EQUIPMENT FOR KITCHEN NO. 1—Continued.

AGATE OR ENAMEL WARE—continued.

	Cost.
3 enamel covers for the above	$0.70
1 rice or milk boiler, 1-quart, with enamel cover	.85
1 rice or milk boiler, 2-quart, with enamel cover	.00
1 rice or milk boiler, 3-quart, with enamel cover	1.25
1 rice or milk boiler, 4-quart, with enamel cover	1.60
1 stove pot, 14-quart, with enamel cover	1.70
4 Berlin kettles, 6-quart, with enamel cover	3.12
2 pie plates, large, 11-inch diameter, 12/4 inches deep	.48
12 pie plates, small, 9-inch diameter, 1 inch deep	2.16
1 wash bowl, 12-inch diameter	.30
1 dish pan, 16½-inch diameter, 5 inches deep	1.00
1 ladle with hooked handle	.15
1 colander, No. 2 size	.50
1 coffee pot, 4-quart, enamel cover	.80
1 corner sink strainer	.25

TINWARE.

1 strainer, 4-inch, with rest and wooden handle	.10
1 strainer, fine, 6 inches in diameter	.25
1 strainer, coarse, 6 inches in diameter	.25
1 soap shaker, large	.15
7 cake coolers, 10 by 14 inches	1.05
1 dish drainer, heavy wire	.25
2 potato ricers	.25
1 funnel, large, 7-inch	.35
1 funnel, small, 4½-inch	.20
1 flour sifter	.25
6 bread tins, No. 1 sponge	1.20
2 cake pans, No. 2 square biscuit	.60

TINWARE—continued.

2 cake pans, No. 1 square biscuit	$0.50
1 grater, No. 2	.10
1 grater, No. 2 (different make)	.10
1 colander, 12-inch	.60
1 cake turner, square	.10
1 quart measure, graduated	.20
1 corer	.10
1 milk-bottle opener	.05
12 biscuit cutters, 4 each of sizes Nos. 1, 2, and 3	1.20
1 skimmer ladle	.10
1 wire dishcloth	.10
2 sets muffin tins, 12 in a set	1.00
1 angel-cake tin, tube, removable bottom	.20

MISCELLANEOUS.

1 garbage pail, with cover, galvanized iron	.78
1 rubbish can, galvanized iron	2.00
1 scrub pail, 12-quart, heavy, galvanized iron	.50
1 twine mop, medium, 16-ounce	.35
1 broom	.50
1 can opener, with corkscrew	.10
3 egg beaters, No. 1	1.50
2 egg beaters	.30
1 set spice boxes, 5 in a set, white enamel	.45
1 dustpan	.35
1 sanitary dustpan	.50
1 dustpan brush	1.00
1 dustpan brush, No. 3	.35
1 cream whip, 1-quart	.50
1 ice-cream disher, 10 portions to quart	1.50
1 food chopper	1.00
4 asbestos mats, round, 10-inch, tin-bound	.40
4 asbestos mats, oval, 12-inch, tin-bound	.60
Total	161.12

4. EQUIPMENT FOR KITCHEN NO. 2.

	Cost.
1 gas stove	$40.00
1 sink, iron enamel, with integral back, faucets and connections incinded	15.00
1 composition top table	10.00
1 table, pine, 5 feet by 29 inches, with drawer	5.00

WOODENWARE.

1 mop handle	.35
1 towel rack, 5-arm	.15
1 set flour buckets, 3 in a set	1.95
4 pastry boards, 20 by 30 inches, cleated ends	2.00
1 rolling pin, 10 by 1½, revolving handles	.25
1 chopping bowl, round, 12-inch, oiled	.25
1 chopping bowl, round, 14-inch, oiled	.50
6 doughnut cutters	.90
1 ham board, 10 by 14 inches	.30
1 dish rack, folding	.30
1 vegetable brush, 1½-inch, twine-bound	.45
1 potato masher	.10
2 cake spoons, 12-inch, slit bowl	.24
2 cake spoons, 12-inch, solid bowl	.20
1 scrub brush, solid back	.20

IRON WARE.

1 fry pan, size No. 7	.20
1 fry pan, size No. 8	.38
1 griddle, medium size, with side handle, No. 8	.35
1 frying kettle with basket, No. 0100 L. & G. Mfg. Co	1.90

EARTHEN WARE.

	Cost.
3 nests of bowls, 4 in set, white ware	$6.90
2 milk pitchers, white ware, C. C., 2½-quart	.66
1 platter, white ware, C. C., 12-quart	.21
1 platter, white ware, C. C., 18-quart	.54

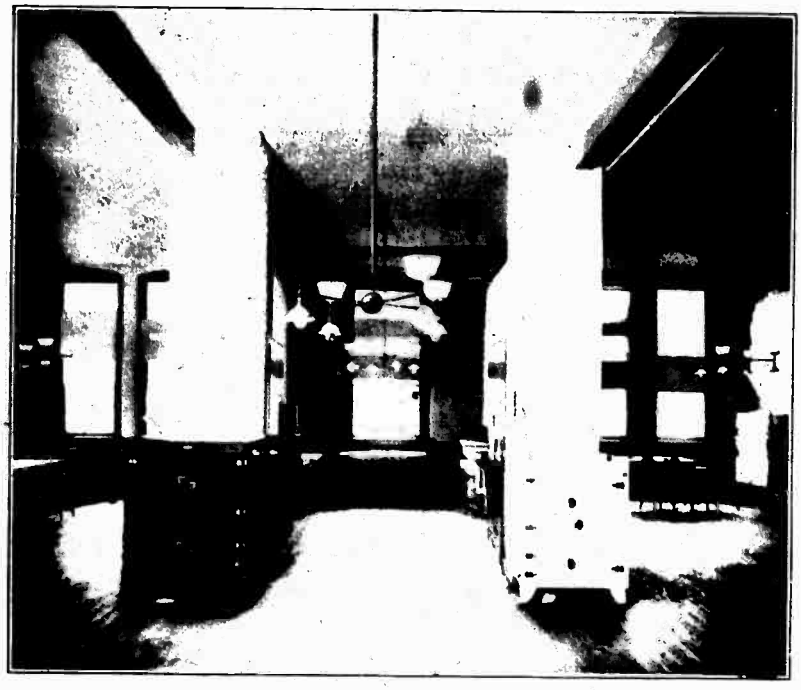
GLASS.

12 measuring cups, thirds and quarters	1.20
4 lemon squeezers, with lipped trays No. 3	.40
2 glass rolling pins, 12 by 3 inches	.90
2 jugs, 1-gallon	1.00
8 jars with flat screw tops, 1-quart	.80
8 jars with flat screw tops, 1-pint	.80
1 butter jar, flat top, medium	.30

CUTLERY.

6 spatulas, 6-inch, ting riveted in handle	3.00
8 case knives, medium	.84
8 forks, three-prong, medium	.84
6 vegetable knives, riveted handle	.90
6 vegetable knives, ferrule driven in handle	.60
1 center-cut bread knife No. 127	.50
1 butcher knife, 6-inch	.35
1 bread knife, 8-inch	.45
1 mincing knife, 2 tings in handle	.35
1 flesh fork, wooden handle	.25
1 ice pick, 6 inches long	.10
1 French meat carver, 10 inches long	1.25
1 lamb cleaver, 8-inch blade	1.15

SCHOOL NO. 1. FINISHED UNIT KITCHEN.



A. SCHOOL NO. 2. UNIT KITCHENS.

B. DETAIL OF ONE KITCHEN SHOWN IN *A.*

4. EQUIPMENT FOR KITCHEN NO. 2—Continued.

CUTLERY—continued.	Cost.
4 knives, Lasher silver	$0.66
2 forks, Lasher silver	.46
SPOONS.	
2 sets aluminum measuring spoons, ½, ⅓, ¼	.40
1 aluminum spoon, 13 inches long	.35
1 aluminum spoon, 16 inches long	.40
12 teaspoons, Lasher silver	.65
8 tablespoons, Lasher silver	.94
AGATE OR ENAMEL WARE.	
1 teakettle, seamless, 5 quarts	.60
1 saucepan, 2-quart, lipped	.15
1 saucepan, 3-quart, lipped	.18
1 saucepan, 4-quart, lipped	.22
3 enamel covers for the above	.47
1 rice or milk boiler, 1-quart, with enamel cover	.53
1 rice or milk boiler, 2-quart, with enamel cover	.60
1 rice or milk boiler, 3-quart with enamel cover	.75
1 rice or milk boiler, 4-quart, with enamel cover	.86
1 stove pot, 14-quart, with enamel cover	1.10
4 Berlin kettles, 6-inch, with enamel cover	1.80
2 pie plates, large, 11 inches diameter, 1½ inches deep	.36
12 pie plates, small, 9 inches diameter, 1½ inches deep	1.44
1 washbowl, 12 inches diameter	.20
1 dishpan, 14-quart, 16½ by 5 inches	.59
1 corner sink strainer	.25
1 ladle with hooked handle	.10
1 colander, No. 2 size	.33
TINWARE.	
1 strainer, 4-inch, with rest and wooden handle	.10
1 fine strainer, 6 inches diameter	.25
1 coarse strainer, 6 inches diameter	.25
1 extension strainer	.10
1 large soap shaker	.15
7 cake coolers, 10 by 14 inches	1.05
1 dish drainer, heavy wire	.25
2 potato ricers	.50

TINWARE—continued.	Cost.
3 layer-cake tins, round, medium	$0.30
1 funnel, large, 7-inch	.35
1 funnel, small, 4½-inch	.20
1 flour sifter	.25
6 bread tins, No. 1 sponge	1.20
2 cake pans, No. 2 square biscuit	.60
2 cake pans, No. 1 square biscuit	.50
1 grater, No. 3	.10
1 grater, No. 2 (different make)	.10
1 colander, 12-inch	.60
1 cake turner, square	.10
1 quart measure, graduated	.20
1 corer	.10
12 biscuit cutters, 4 each of sizes Nos. 1, 2, and 3	1.20
1 skimmer, flat	.10
1 skimmer, ladle	.10
1 milk-bottle opener	.05
1 wire dishcloth	.10
1 nutmeg grater	.10
1 angel-cake tin, tube, removable bottom	.20
2 sets muffin tins, 12 in a set	1.00
MISCELLANEOUS.	
1 garbage pail with cover, galvanized iron No. 03	.78
1 rubbish can	2.00
1 scrub pail, heavy, galvanized iron, 12-quart	.50
1 twine mop, 16-ounce, medium	.35
1 broom	.50
1 can opener, with corkscrew	.10
3 egg beaters	1.50
2 egg beaters (different makes)	.30
1 cream whip, 1-quart	.50
1 set spice boxes, white enamel, 5 in a set	.45
1 aluminum tea ball	.20
1 dustpan	.35
1 sanitary dustpan	.50
1 dustpan brush	1.00
1 dustpan brush (different size)	.35
1 food chopper	1.00
4 asbestos mats, round, 10-inch, tin bound	.40
4 asbestos mats, oval, 12-inch, tin bound	.60
1 ice-cream disher, 10 portions to the quart	1.50
Total	142.50

5. EQUIPMENT FOR KITCHEN NO. 3.

	Cost.
1 gas stove	$38.00
1 cast-iron sink, with back, faucets included	7.00
1 table, pine, 5 feet by 29 inches, with draw	5.00
4 factory stools, 24-inch	2.07
WOODENWARE.	
1 pastry board, 20 by 30 inches, cleated ends	.60
1 rolling pin, 10 by 7½ inches, revolving handles	.25
1 round chopping bowl, 12-inch, oiled	.25
1 round chopping bowl, 14-inch, oiled	.50
2 wooden cake spoons, 12-inch, slit bowl	.24
2 wooden cake spoons, 12-inch, solid bowl	.20
1 potato masher	.10
6 doughnut cutters	.90
1 ham board, 10 by 14 inches	.30
1 dish rack, folding	.30
1 vegetable brush, 1½-inch, twine bound	.45
1 set flour buckets, 3 in a set	1.95
1 clothes horse, 5 feet, 3-fold	.95

WOODENWARE—continued.	Cost.
1 towel rack, 5-arm	$0.15
1 mop handle	.35
1 scrub brush, solid back	.20
IRONWARE.	
1 fry pan, No. 7 size	.35
1 fry pan, No. 8 size	.38
1 griddle, medium size, with side handle, No. 8	.35
1 fry kettle with basket	.90
EARTHENWARE.	
3 nests of bowls, 4 in a set, yellow ware	4.56
2 milk pitchers, white ware, 2½-quart	.66
1 platter, 12-inch, white ware	.21
1 platter, 15-inch, white ware	.54
GLASSWARE.	
12 measuring cups, thirds and quarters	1.20
4 lemon squeezers with lipped trays, No. 3	.40
2 glass rolling pins, 12 by 3 inches	.90

4. EQUIPMENT FOR KITCHEN NO. 3—Continued.

GLASSWARE—continued.	Cost.
2 jugs, 1-gallon	$1.00
1 butter jar, flat top, medium	.20
8 jars, with flat screw tops, 1-quart	.80
8 jars, with flat screw tops, 1-pint	.80
CUTLERY.	
6 spatulas, 6-inch, tins riveted in handle	3.00
6 case knives, medium	.84
8 forks, three-prong, medium	.84
6 vegetable knives, riveted handles	.90
6 vegetable knives, ferrule driven in handle	.60
1 bread knife, center cut	.50
1 bread knife, 8-inch	.45
1 butcher knife, 6-inch	.35
1 flesh fork, wooden handle	.25
1 mincing knife, 2 tines in handle	.35
1 ice pick, 6 inches long	.10
4 knives, Lasher silver	.66
4 forks, Lasher silver	.46
SPOONS.	
2 sets aluminum measuring spoons, ¼, ½, 1	.40
1 aluminum spoon, 13 inches long	.35
1 aluminum spoon, 16 inches long	.40
12 teaspoons, Lasher silver	.65
8 tablespoons, Lasher silver	.94
AGATE OR ENAMEL WARE.	
1 teakettle, seamless, 7-quart	1.35
1 saucepan, 2-quart, lipped	.30
1 saucepan, 3-quart, lipped	.35
1 sautepan, 4-quart, lipped	.41
3 enamel covers for the above	.00
1 rice or milk boiler, 2-quart, with enamel cover	.98
1 rice or milk boiler, 3-quart, with enamel cover	1.35
1 rice or milk boiler, 4-quart, with enamel cover	1.65
4 Berlin kettles, 6-quart, with enamel cover	3.60
1 Berlin kettle, 14-quart, with enamel cover	1.75
2 pie plates, 11 inches diameter, 1¼ inches deep	.60
12 pie plates, 9-inch diameter by ¾ inch deep	2.64
1 washbowl, 12-inch diameter	.35
1 dishpan, 14-quart, 16½-inch diameter by 5 inches deep	1.25
1 ladle with hooked handle, 8¾ inches long	.25
1 colander, 3-quart size, top measure, 10¾ inches	.65
1 coffee pot, 4-quart, enamel cover	.90
TINWARE.	
1 strainer, 4-inch, with rest and wooden handle	.10
1 fine strainer, 6-inch diameter	.26

TINWARE—continued.	Cost.
1 coarse strainer, 6-inch diameter	$0.25
1 extension strainer	.10
1 soap shaker, large	.15
7 cake coolers, 10 by 14 inches	1.05
1 dish drainer, heavy wire	.25
2 potato ricers	.50
1 large funnel, 7-inch	.35
1 small funnel, 4½-inch	.20
1 flour sifter	.25
6 bread tins, No. 1 spong	1.20
2 cake pans, No. 2, square biscuit	.60
2 cake pans, No. 1, square biscuit	.50
1 grater, No. 2	.10
1 grater, No. 2 (different make)	.10
1 colander, 12-inch	.60
1 cake turner, square	.10
1 quart measure, graduated	.20
1 corer	.10
12 biscuit cutters, 4 each of sizes Nos. 1, 2, and 3	1.20
1 skimmer, flat	.10
1 skimmer ladle	.10
1 wire dishcloth	.10
1 milk-bottle opener	.05
1 nutmeg grater	.10
1 angel cake tin, tube, removable bottom	.20
2 sets muffin tins, 12 in a set	1.00
1 bread raiser, No. 110	.85
1 clothes boiler, seamless cover	2.50
MISCELLANEOUS	
1 garbage pail, with cover, galvanized iron	.78
1 rubbish can, galvanized iron	2.00
1 scrub pail, heavy, 12-quart, galvanized iron	.50
1 twine mop, 16-ounce, medium	.35
1 broom	.50
1 can opener, with corkscrew	.10
3 egg beaters, No. 1	1.50
2 egg beaters (different make)	.30
1 cream whip, 1-quart	.50
1 set spice boxes, white enamel, 5 in a set	.45
1 food chopper	1.00
1 ice-cream disher, 10 to quart	1.50
4 asbestos mats, round, 10-inch, tin bound	.40
4 asbestos mats, oval, 12-inch, tin bound	.60
1 knife sharpener	1.25
1 clothes basket, oval, willow, medium size	1.50
1 wringer and bench	6.50
1 mop wringer on pail	2.50
1 glass washboard	.50
1 dustpan	.35
1 sanitary dustpan	.50
1 dustpan brush	1.00
1 dustpan brush (different size)	.35
Total	152.01

LISTS OF MATERIAL AND COST OF CONSTRUCTING THREE UNIT KITCHENS, ... SCHOOL NO. 1.

Figures 1 and 2 show how the third floor of a wooden storage building was converted into unit kitchens. Plate No. 1 is a photograph of one of these kitchens. This portion of the building had never been finished; so in addition to sheathing the walls, it was necessary to install plumbing, electric wiring, and gas connections. The carpentry and wiring were done by the boys' department of the school. Expenditures for stock are given below.

3,637 feet ..rmwood flooring	$134.94
273 feet hemlock boards	6.55
1,954 feet spruce, 2 by 2 inches	52.77
1,200 feet furring	32.90
675 feet ..ched spruce	20.09
201 feet North Carolina pine	11.05
4,014 feet cypress ⅞ by 2 inches	40.14
502 feet ¾-inch molding	3.26
335 feet cypress, 7½-inch base	18.43
1,004 feet 7/8 by 12-inch cypress	30.12
180 pounds 7-penny wire nails	5.40
125 pounds 8-penny common nails	4.41
25 pounds wire lath nails	1.50
55 pounds wire nails	1.94
25 pounds 1½-penny wire nails	1.50
11,376 square feet wall board	225.96
9 mortise locks	6.75
9 pairs jet knobs	1.80
9 keyhole escutcheons	$1.08
9 base knobs	.18
1 can floor wax	.50
2 coats paint for walls and oiling floors	198.00
Plumbing	132.00
Doors and hinges were taken from another part of the plant.	
ELECTRICAL MATERIAL.	
Stock for wiring	$74.22
Fixtures	71.50
Panel box	12.80
Fuses	4.20
Extra wiring for power circuit	5.50
Plug receptacles	9.98
Total	1,077.45

LISTS OF MATERIAL AND COST OF CONSTRUCTING THREE UNIT KITCHENS, ... SCHOOL No. 2.

In this brick building a partition was torn out, throwing two rooms into one, and kitchens installed in this space. Figures 3 and 4 give the space both before and after the alterations. Plate 2 *A* shows the finished kitchens and Plate 2 *B* shows one kitchen in detail.

The work was done by contract according to the items given below. As the rooms were already lighted by both electricity and gas there was no additional expense for either fixtures or installation.

Carpentry, including lumber and labor	$280.00
Plastering	124.00
Plumbing, including sinks, prices of which are given under equipment for each kitchen, also copper pipes for gas-stove connections	210.00
Total	614.00

Restaurant record and cost sheet (date) ....., 1914.

Amount.	Article.	Quantity of material used.	Cost.	Selling price.	Left over.	Disposal.

Total .....
Cost of service .....
Cost of ice .....
Cost of fuel .....
Total cost .....

Signature of clerk. .....

Receipts .....

Signature of teacher. .....

CARD FOR COOKING RECEIPTS.

Individual receipt card used in teaching cooking.
The back of the card is for "Directions."

COOKING RECEIPTS.

Name..... Date.....

Article..... Quantity.....

Method of cooking..... Time.....

Material.	Quantity.	Cost.

Helpful books for the kitchen.

Books.	Author.	Publisher.	Price.
Boston Cooking-School Cook Book	Fanny M. Farmer	Little, Brown & Co., New York	$1.60
A New Book of Cookery	do.	do.	1.60
Food and Cookery for the Sick and Convalescent.	do.	do.	1.50
What to Have for Dinner	do.	do.	1.0
Fireless Cook Book	M. J. Mitchell	Doubleday, Page & Co., New York	1.25
International Cook Book	A. Filippini	do.	1.00
Practical Cooking and Serving	Janet Hill	do.	1.50
The New Housekeeping	C. Frederick	do.	1.00
Like Mother Used to Make	C. T. Herrick	Dana, Estes & Co., Boston	1.25
The Cook Book of Leftovers		Harper & Bros., New York	1.00
Paper Bag Cookery	Nicholas Soyer	Sturges & Walton, New York	1.00
Home Science Cook Book	Mary J. Lincoln and Anna Barrows.	Whitcomb & Barrow, Boston	1.00
Lessons in Cookery through Preparation of Meals.		American School of Home Economics, Chicago.	
Library of Home Economics (12 volumes).		do.	16.20
Pure Foods	John Olsen	Ginn & Co	.80
The Lunch Room	Paul Richards	The Hotel Monthly, 443 South Dearborn St., Chicago.	2.00
Food and Dietetics	Robert Hutchinson	William Wood & Co., New York	3.00
The Efficient Kitchen	Georgie B. Child	Housekeeping Experiment Station, Stamford, Conn.	1.25

BULLETIN OF THE BUREAU OF EDUCATION.

[NOTE.—With the exceptions indicated, the documents named below will be sent free of charge upon application to the Commissioner of Education, Washington, D. C. Those marked with an asterisk (*) are no longer available for free distribution, but may be had of the Superintendent of Documents, Government Printing Office, Washington, D. C., upon payment of the price stated. Remittances should be made in coin, currency, or money order. Stamps are not accepted. Documents marked with a dagger (†) are out of print.]

1906.

†No. 1. Education bill of 1906 for England and Wales as it passed the House of Commons. A. T. Smith.
†No. 2. German views of American education, with particular reference to industrial development. William N. Hallmann.
*No. 3. State school systems: Legislation and judicial decisions relating to public education, Oct. 1, 1904, to Oct. 1, 1906. Edward C. Elliott. 15 cts.

1907.

†No. 1. The continuation school in the United States. Arthur J. Jones.
†No. 2. Agricultural education, including nature study and school gardens. James R. Jewell.
†No. 3. The auxiliary schools of Germany. Six lectures by B. Maennel.
†No. 4. The elimination of pupils from school. Edward L. Thorndike.

1908.

†No. 1. On the training of persons to teach agriculture in the public schools. Liberty H. Bailey.
*No. 2. List of publications of the United States Bureau of Education, 1867–1907. 10 cts.
*No. 3. Bibliography of education for 1907. James Ingersoll Wyer, jr., and Martha L. Phelps. 10 cts.
†No. 4. Music education in the United States; schools and departments of music. Arthur L. Manchester.
*No. 5. Education in Formosa. Julean H. Arnold. 10 cts.
*No. 6. The apprenticeship system in its relation to industrial education. Carroll D. Wright. 15 cts.
*No. 7. State school systems: II. Legislation and judicial decisions relating to public education, Oct. 1, 1906, to Oct. 1, 1908. Edward C. Elliott. 30 cts.
*No. 8. Statistics of State universities and other institutions of higher education partially supported by the State, 1907–8. 5 cts.

1909.

*No. 1. Facilities for study and research in the offices of the United States Government in Washington. Arthur T. Hadley. 10 cts.
*No. 2. Admission of Chinese students to American colleges. John Fryer. 25 cts.
*No. 3. Daily meals of school children. Caroline L. Hunt. 10 cts.
†No. 4. The teaching staff of secondary schools in the United States; amount of education, length of experience, salaries. Edward L. Thorndike.
No. 5. Statistics of public, society, and school libraries in 1908.
*No. 6. Instruction in the fine and manual arts in the United States. A statistical monograph. Henry T. Bailey. 15 cts.
No. 7. Index to the Reports of the Commissioner of Education, 1867–1907.
*No. 8. A teacher's professional library. Classified list of 100 titles. 5 cts.
*No. 9. Bibliography of education for 1908–9. 10 cts.
No. 10. Education for efficiency in railroad service. J. Shirley Eaton.
*No. 11. Statistics of State universities and other institutions of higher education partially supported by the State, 1908–9. 5 cts.

1910.

*No. 1. The movement for reform in the teaching of religion in the public schools of Saxony. Arley B. Show. 5 cts.
No. 2. State school systems: III. Legislation and judicial decisions relating to public education, Oct. 1, 1908, to Oct. 1, 1909. Edward C. Elliott.
†No. 3. List of publications of the United States Bureau of Education, 1867–1910.
*No. 4. The biological stations of Europe. Charles A. Kofoid. 80 cts.
†No. 5. American schoolhouses. Fletcher B. Dressler.
†No. 6. Statistics of State universities and other institutions of higher education partially supported by the State, 1909–10.

1911.

*No. 1. Bibliography of science teaching. 5 cts.
*No. 2. Opportunities for graduate study in agriculture in the United States. A. C. Monahan. 5 cts.
*No. 3. Agencies for the improvement of teachers in service. William C. Ruediger. 15 cts.
*No. 4. Report of the commission appointed to study the system of education in the public schools of Baltimore. 10 cts.
*No. 5. Age and grade census of schools and colleges. George D. Strayer. 10 cts.
*No. 6. Graduate work in mathematics in universities and in other institutions of like grade in the United States. 5 cts.
†No. 7. Undergraduate work in mathematics in colleges and universities.
†No. 8. Examinations in mathematics, other than those set by the teacher for his own classes.
No. 9. Mathematics in the technological schools of collegiate grade in the United States.
†No. 10. Bibliography of education for 1909–10.
†No. 11. Bibliography of child study for the years 1908–9.
†No. 12. Training of teachers of elementary and secondary mathematics.
*No. 13. Mathematics in the elementary schools of the United States. 15 cts.
*No. 14. Provision for exceptional children in the public schools. J. H. Van Sickle, Lightner Witmer, and Leonard P. Ayres. 10 cts.
*No. 15. Educational system of China as recently reconstructed. Harry E. King. 10 cts.
†No. 16. Mathematics in the public and private secondary schools of the United States.
†No. 17. List of publications of the United States Bureau of Education, October, 1911.
*No. 18. Teachers' certificates issued under general State laws and regulations. Harlan Updegraff. 20 cts.
No. 19. Statistics of State universities and other institutions of higher education partially supported by the State, 1910–11.

1912.

*No. 1. A course of study for the preparation of rural-school teachers. F. Mutchler and W. J. Craig. 5 cts.
†No. 2. Mathematics at West Point and Annapolis.
*No. 3. Report of committee on uniform records and reports. 5 cts.
*No. 4. Mathematics in technical secondary schools in the United States. 5 cts.
*No. 5. A study of expenses of city school systems. Harlan Updegraff. 10 cts.
*No. 6. Agricultural education in secondary schools. 10 cts.
*No. 7. Educational status of nursing. M. Adelaide Nutting. 10 cts.
*No. 8. Peace day. Fannie Fern Andrews. 5 cts. [Later publication, 1913, No. 12. 10 cts.]
*No. 9. Country schools for city boys. William S. Myers. 10 cts.
†No. 10. Bibliography of education in agriculture and home economics.
†No. 11. Current educational topics, No. I.
†No. 12. Dutch schools of New Netherland and colonial New York. William H. Kilpatrick.
*No. 13. Influences tending to improve the work of the teacher of mathematics. 5 cts.
*No. 14. Report of the American commissioners of the international commission on the teaching of mathematics. 10 cts.
†No. 15. Current educational topics, No. II.
†No. 16. The reorganized school playground. Henry S. Curtis.
*No. 17. The Montessori system of education. Anna T. Smith. 5 cts.
*No. 18. Teaching language through agriculture and domestic science. M. A. Leiper. 5 cts.
*No. 19. Professional distribution of college and university graduates. Bailey B. Burritt. 10 cts.
†No. 20. Readjustment of a rural high school to the needs of the community. H. A. Brown.
†No. 21. Urban and rural common-school statistics. Harlan Updegraff and William R. Hood.
No. 22. Public and private high schools.
No. 23. Special collections in libraries in the United States. W. Dawson Johnston and Isadore G. Mudge.
†No. 24. Current educational topics, No. III.
†No. 25. List of publications of the United States Bureau of Education, 1912.
†No. 26. Bibliography of child study for the years 1910–1911.
No. 27. History of public-school education in Arkansas. Stephen B. Weeks.
*No. 28. Cultivating school grounds in Wake County, N. C. Zebulon Judd. 5 cts.
No. 29. Bibliography of the teaching of mathematics, 1900-1912. D. E. Smith and Chas. Goldziher.
No. 30. Latin-American universities and special schools. Edgar E. Brandon.
*No. 31. Educational directory, 1912. 10 cts.
*No. 32. Bibliography of exceptional children and their education. Arthur MacDonald. 5 cts.
†No. 33. Statistics of State universities and other institutions of higher education partially supported by the State, 1912.

1913.

No. 1. Monthly record of current educational publications, January, 1913.
*No. 2. Training courses for rural teachers. A. C. Monahan and B. H. Wright. 5 cts.
*No. 3. The teaching of modern languages in the United States. Charles H. Handschin. 15 cts.
*No. 4. Present standards of higher education in the United States. George E. MacLean. 20 cts.
†No. 5. Monthly record of current educational publications. February, 1913.

*No. 6. Agricultural instruction in high schools. C. H. Robison and F. B. Jenks. 10 cts.
*No. 7. College entrance requirements. Clarence D. Kingsley. 15 cts.
*No. 8. The status of rural education in the United States. A. C. Monahan. 15 cts.
†No. 9. Consular reports on continuation schools in Prussia.
†No. 10. Monthly record of current educational publications, March, 1913.
†No. 11. Monthly record of current educational publications, April, 1913.
*No. 12. The promotion of peace. Fannie Fern Andrews. 10 cts.
*No. 13. Standards and tests for measuring the efficiency of schools or systems of schools. 5 cts.
*No. 14. Agricultural instruction in secondary schools. 10 cts.
†No. 15. Monthly record of current educational publications, May, 1913.
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