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AN EXPLORATORY ATTEMPT TO CLARIFY
THE NEED FOR VARIED PUPIL EXPERI-
ENCE WITH MEAT MEALS INCLUDING
SOME SUGGESTIONS FOR HOMEMAKING
TEACHERS

Nancy MacKean 1960



SCHOOL OF NATURE RESOURCES
MICHIGAN STATE UNIVERSITY
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AN EXPLORATORY ATTEMPT TO CLARIFY THE NEED FOR
VARIED PUPIL EXPERIENCE WITH MEAT MEALS
INCLUDING SOME SUGGESTIONS FOR
HOMEMAKING TEACHERS

by

Nancy MacKean

A Problem

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CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS

The writer is a former homemaking teacher and expects to return to this field upon the completion of her graduate work. During her teaching experience she realized that in all areas of homemaking there is urgent need for careful planning so students can and do have significant learning experiences. Many homemaking teachers have difficulty in making effective decisions about the teaching of realistic family meals. Frequently in "school meals" insufficient consideration has been given to the selection, preparation, and service of meats, fish, and poultry.

Importance of the Problem

There is increasing evidence that more emphasis should be placed on significant learning experiences related to "meat meals" in homemaking classes. Meat is one of the most basic foods of our diet. The yearly per capita consumption of meat continues to increase. American people tend to like meat and consider it most important to have this "mainstay" prepared properly. Since meat usually involves the largest outlay of money in terms of a meal, homemakers are eager to learn to select and to prepare this food in a variety of ways. However, homemakers tend to:

1. Have a feeling that meat cookery is difficult.
2. Buy only certain types of meat, especially hamburger.

Results from several research studies indicate that high school girls lack basic understandings about meat selection and preparation as a part of family meals. These studies also indicate that students in all grades (9-12) are interested in having more instruction on meats than they now have in homemaking classes.

Homemaking teachers have reluctantly accepted the responsibility for increasing the instruction in meat meals. In general they feel limitations due to:

1. The high cost of meat, and the relatively limited school budget.
2. The length of time which is necessary to prepare meat meals and the length of the class period.
3. The lack of individual student experience in the preparation of meat meals.

Purposes of the Study

The purposes of the study were to:

1. Summarize the evidence for providing more emphasis on meat meals in the homemaking program.
2. Define some criteria as found in the review of literature for effective instruction in meat meals.
3. Use the criteria in developing some resource materials for homemaking teachers to use in planning meat experiences for their classes.

Definition of Terms

Meat refers in this problem to the portion of the meal that furnishes the main source of protein. Included in this area would be cuts of beef,

pork, veal, and lamb, fish, and poultry.

Meat Meal refers in this problem to a variety of foods which have been put together to complement a type of meat. This may be a complete and/or a partial meal.

CHAPTER II

REVIEW OF LITERATURE

In this chapter the writer has briefly reviewed and summarized representative literature in relation to six points:

1. Trends in home economics at the secondary level.
2. Research findings which indicate students' understandings and interests in meals with special reference to meats.
3. Cost of adequate food preparation in the homemaking program.
4. Conditions related to the teaching of "foods."
5. Some generalizations about foods with special reference to meats.
6. The relationship of the equipment in homemaking departments to the learning experience.

Trends in Home Economics at the Secondary Level

The following points are emphasized by Dorothy Leahy in relation to trends in home economics.¹

- a. A shifting of emphasis in goals from homemaking skills as an end in themselves to the social development of the individual as a person and as a member of the family.
- b. Skills are not being discarded but rather set in proper focus as to their contribution to home relationships. Skills make a very positive contribution to good home relationships when

¹ Dorothy Leahy, "Trends in Homemaking Education," Journal of Home Economics, Vol. 42, No. 4, April, 1950, p. 269.

our goal is the effect of the skill rather than its development as an end in itself.

- c. Home economics is an ever changing program to meet the needs of a changing society in an ever-changing world.
- d. There is growing evidence of more cooperation among pupils and teachers in an effort to develop a more functional program in keeping with the needs of the pupil.
- e. More emphasis is being given to evaluation particularly self-evaluation in an effort to find out what is happening to the individual instead of what someone else says about what he is doing or what is happening to him.
- f. More women are becoming both homemakers and wage earners. Educators need to take notice of this fact to provide more adequately for the needs of their students.

Research Findings Which Indicate Students' Understandings
and Interests in Meals with Special
Reference to Meats

Several studies were reviewed which indicated the lack of opportunity students have had to learn meat cookery and their interest to do so.

Clara Brown Army discovered in the Minnesota study the following in
relation to student lacks in meal planning.²

- a. Few girls were able to answer items dealing with protein foods until the 11 or 12th grades. In addition they could not differentiate between expensive and inexpensive cuts.
- b. The majority had not learned even at that level the methods used to prepare different cuts of meat to obtain a palatable product at the temperature at which various protein foods should be cooked.
- c. Foods instruction appeals to most adolescents because it can furnish so many types of satisfaction.
- d. The study also showed evidence that as students grew older, their interest in foods tended to remain high, but they were particularly

² Clara Brown Army, The Effectiveness of the High School Program in Home Economics, (Minneapolis: University of Minnesota Press, 1952), p. 193 ff.

concerned with learning new things about food and its preparation and service.

- e. Meat cookery should receive greater emphasis. Students apparently knew little about either selecting or cooking meats.

Another study done by Mae VanCitters in Michigan brings out the following factors which indicate student interest in meal planning and meat meals.³

- a. Pupils in all grades ranked preparation of meats in a variety of ways among the top six items in this category, indicating a need for some work with meats at each grade level with the most extensive consideration being given at 11 and 12th grades.
- b. Other items to which 80 per cent or more of the pupils at all grade levels gave a positive response concerning which should be a part of the work in meal planning for each grade include: adequate meals within the family budget, and food combinations for attractive, nutritious meals.
- c. Twelfth graders wanted to know how to plan so they would know what foods to buy, where to get ideas for planning meals.
- d. All levels indicated interest in lunch or supper foods.
- e. Pupils in all grades were interested in selection of meats.
- f. The problem considered most important at all grade levels was how to prepare foods in a variety of ways.

Cost of Adequate Food Preparation in the Homemaking Program

Ailsie Stevenson has reported the results of a study done in the state of Washington in relation to the cost of an adequate food preparation program. The main points emphasized in her article are:⁴

³ Mae VanCitters, "Interests and Problems Related to Meal Planning and Food Preparation by High School Students in Michigan," (Unpublished Master's thesis, Iowa State College, 1955).

⁴ Ailsie Stevenson, "The Cost of an Adequate Food Preparation Program," Practical Home Economics, Vol. 31, No. 1, Sept., 1952, p. 40.

- a. Economy is not obtained by skimping on the amount of food prepared or by overemphasizing films and demonstrations.
- b. Laboratory equipment should be used to better advantage.
- c. There should be more individual responsibility by high school girls.
- d. More teaching should be done on the meal basis in contrast to single foods.
- e. More emphasis should be placed on partial meals for the sake of management experiences.
- f. Occasional complete meals should be served following the necessary practice lessons on dishes included in the meals.
- g. Teacher demonstrations are valuable for presenting new foods or techniques and for organization of work, but should not be habitual.
- h. Demonstrations by the girls may be substituted occasionally for class activity, but require careful planning.
- i. There should be five or six food preparations every two weeks.

Conditions Related to Teaching of "Foods"

Hazel Price has reported the results of a study conducted in Ohio to determine whether it is still possible to teach foods on a meal-planning basis in a 60-minute period as effectively as on a 90-minute period basis. The conclusions of the study were as follows:⁵

1. The meal basis of teaching foods can be successfully used in either 60- or 90-minute periods provided:
 - a. Both class and teacher manage time to good advantage.
 - b. That meals are simple enough and servings small enough to be prepared and eaten in the time allowed.

⁵ Hazel H. Price, "Studying Achievement in Foods Classes," Journal of Home Economics, Vol. 43, No. 4, April, 1951, p. 263.

- c. That arrangement of working space, equipment, and supplies permits the pupil to use her time and energy to advantage.
- d. That the class acquires good management habits, such as:
 - (1) Keeping work surfaces clean.
 - (2) Doing jobs with the fewest motions possible.
- e. That pupils evaluate themselves and each other frequently on standards and on their work habits.

2. Both periods have specific advantages and disadvantages.

One teacher has indicated the lacks of her students in relation to meat cookery and suggests how she arranges her teaching of meat cookery to compensate for student lacks. This teacher has stated the following in relation to meat cookery lessons:⁶

- 1. Students are often confused about the difference between the basic principles of meat cookery and meat recipes for meat dishes.
- 2. Students are often ignorant of the wide variety of meats available because of the few types of meats served in their homes.
- 3. First hand knowledge of choice cuts is often lacking due to their prohibitive costs.

Method of teaching used to overcome these student lacks.

- 1. Determine that there are two classes of meats--tender and less tender.
- 2. Methods and recipes used at home are discussed and compared with the two general methods so that the girls understand the basic types of preparations used.
- 3. Ground meat is used to demonstrate the various methods of meat cookery for economy's sake.
- 4. Visual preparation is used for the more expensive cuts. Through the use of visual aids the students gain a wealth of experience although they are not able to smell or taste the finished product.

⁶Anna Jo Pearce, "How I Teach Meat Cookery," Practical Home Economics, Vol. 2, No. 6, March, 1957, p. 30.

Two editorials which deal with the teaching of foods in general are summarized below. One article of special interest found in What's New in Home Economics states:⁷

1. Our real objective is teaching foods and it may well be that the method or methods used must vary with the situation at hand. Could it not even be that our very interpretation of the term teaching foods by the meal planning method is itself open to wide variation?
2. The ultimate goal of effective family centered teaching of foods must include these three essentials:
 - a. Students must learn to cook foods skillfully.
 - b. They must know how to plan meals correctly.
 - c. They must be able to prepare and serve meals properly.
3. We must take a fresh look at these essentials which will prove helpful in making sure that each is included with the fullest possible measure of achievement no matter how the idea of teaching by the meal-planning method may be interpreted.
4. Skills are the necessary foundation on which good foods and happy meal times are built.
5. The learning must include those practical aspects of meal planning which contribute to successful family and guest meals. One such aspect is time management. Another the ability to plan so that hot foods will be hot and cold foods cold. In addition all should have the background information necessary to know just when to use various types of foods in menus.
6. Our one real goal in our whole food teaching program is to inspire everyone we reach to gain a vision of the part that family meals can and do play in the highest and best family living.

In another editorial found in What's New in Home Economics the following points were emphasized:⁸

⁷ "Teaching Foods Must Include These Three Essentials," What's New in Home Economics, Vol. 20, Feb., 1956, p. 74.

⁸ "Teaching Foods by the Meal-planning Method," What's New in Home Economics, Vol. 20, Feb., 1956, p. 72.

1. Teaching foods by the meal-planning method offers opportunity for closer correlation to real-life situations for family-centered teaching. This method is:
 - a. So basic it includes all phases of foods, nutrition, dietetics, table service and so forth.
 - b. One that gives students clearer understanding. Students learn foods as a whole not a part.
 - c. Easiest way to interest students.
 - d. One that helps teach solutions of home problems.
2. The problems that arise in the use of this method are:
 - a. Time--It is difficult to fit the preparation of meals to a short laboratory period.
 - b. The teaching of cooking skills is basic yet often slighted.
 - c. Group preparation of meals is more expensive than is the cost of teaching individual food preparation.
 - d. Laboratory space and equipment is too limited to make this method of teaching possible or practical.
 - e. Not always practical for success depends on the maturity of the students. They must have a background of basic facts.
 - f. Sometimes too great an emphasis on the complete meal leads to poor cooking habits.
 - g. This method may be too repetitive to students over a three to four year period.

Some Generalizations About Foods With Special
Reference To Meats

The following generalizations have been taken from the Iowa State College generalizations in relation to evaluating foods learnings in the ninth and tenth grades. Some of the generalizations relate to meals in general, but several deal specifically with meats.

⁹
Chadderdon, Index of Generalizations and Items for Evaluation for Foods, 9th and 10th Grades, Iowa State College.

1. Families are alike in many ways, and yet different in many ways.
2. Family practices result from differences in goals, beliefs, values, cultural heritages, resources available, age of family members, occupations.
3. The skillful food manager plans menus in which there is variety in textures, flavor, color and shape.
4. A good manager considers the time required to prepare each food so that too many time-consuming dishes are not included in the same day's menu.
5. Well balanced meals are not necessarily appetizing, since they may lack contrasts in color, flavor, texture, and shape.
6. Meals recommended for people to maintain robust health include adequate amounts of all the basic food groups.
7. Meat, poultry, and fish are excellent sources of protein, iron, niacin, riboflavin, and thiamine. Edible organ meats such as heart, kidney, liver are valued for their protein, minerals, and vitamin contributions.
8. Freezing tends to tenderize meat slightly. High temperatures and/or long cooking toughen proteins.
9. Decrease in weight of meats in the cookery process is in direct proportion to the increase in temperature.
10. Cooking in liquid may increase tenderness by softening the connective tissue.
11. Cuts of meat from the loin or steak areas of the animal are more expensive than those from the organs or from less tender cuts of meat, yet they are no more nutritious.
12. Foods which are more perishable are more expensive than those that can be shipped and held more easily.
13. Ground beef varies in price depending on quality of meat and amount of suet. The variation from less to more expensive is usually in the following order: hamburger, lean ground beef, ground round steak.

The following generalizations are more specifically related to meat cookery and have been quoted from Lowe's Experimental Cookery.¹⁰

¹⁰See page 12.

14. The changes brought by cooking meat may be slight or great depending on how well the meat is cooked.
15. The characteristic changes produced by cooking consist of:
 - a. Change in color.
 - b. Loss in weight.
 - c. Contraction in volume.
 - d. Changes in fatty tissue.
 - e. Changes in structural proteins or connective tissue.
 - f. Changes in muscle fibers.
 - g. Change in flavor.
16. The temperature of cooking affects both the rate and the extent of shrink. In general lower cooking temperatures result in more uniformly cooked meat and in less cooking losses.
17. The possible ways of increasing or decreasing the tenderness of meat are:
 - a. Aging.
 - b. Mechanical alteration of the tissues.
 - c. Treatment with enzymes.
 - d. Freezing.
 - e. Cooking.
 - f. Added substitutes for cooking such as acid, salts, and sugar.
18. In general meat is cooked as follows:
 - a. Tender cuts--by dry heat.
 - b. Less tender cuts--by moist heat.

¹⁰(Continued from page 11) Belle Lowe, Experimental Cookery, (New York: John Wiley and Sons, Inc., 1955), pp. 220-247.

19. The cooking losses are less and the meat more palatable in the uncovered pan. The cooking time is shorter, however, in the covered pan.

The Relationship of the Equipment in Homemaking
Departments to the Learning Experience

Two authors, Ruth Cowles, and Stacey Krasnecki have made some statements in relation to this aspect of the homemaking program.

Ruth Cowles in her article states:¹¹

1. The modern homemaking program, giving instruction in many areas of homemaking, demands attractive, home-like and flexible facilities. Its first function is to serve as a laboratory for home and family life instruction for all boys and girls and for the specialized field of homemaking for all girls.
2. Whatever the department is like there are five essentials to consider in relation to equipment.
 - a. Have at least one all-purpose or multiple purpose laboratory in every department.
 - b. Allow freedom and flexibility in space arrangements.
 - c. Provide adequate and versatile storage.
 - d. Plan for home-like decorations, colorful backgrounds, a center of interest and a teacher conference area in order to obtain the home center atmosphere.
 - e. Permit adaptation for an adult homemaking center that may offer opportunity for out of school classes.

In the same light Stacey Krasnecki has stated:¹²

1. Our major objective in teaching homemaking can be stated simply-- to give young boys and girls a better working knowledge of how to live in a family and how families may better live with one another.

¹¹ Ruth Cowles, "Needed Facilities for a Modern Homemaking Program," American School and University, Vol. 27, 1955, p. 273.

¹² Stacey Krasnecki, "Homemaking Spaces for New School Buildings," American Schools and Universities, Vol. 17, 1955, p. 279.

2. In planning spaces for teaching homemaking we need to provide an educational climate in which certain basic needs are met, so that young people will be better equipped to cope with the society in which they live.
3. Some of the overall objectives which the educational climate of the homemaking room should provide are:
 - a. Provide experiences in all phases of homemaking.
 - b. Set a standard for developing homes in the community.
 - c. Develop a family-centered curriculum.
 - d. Help to achieve personal independence.
 - e. Develop intellectual skills and concepts necessary for competent family living.
 - f. Provide opportunities for growth in managerial ability and competence in the skills of homemaking.
 - g. Help individuals acquire a set of values and an ethical system as a guide to behavior in personal and family living.

In an all-purpose room, modern equipment is usually provided for the preparation of meat meals. Experience with some of the following equipment is generally possible:

Oven--roasting of meats
 Broiler
 Electric roasters
 Electric fry pan
 Deep well
 Meat thermometers
 Pressure cooker
 Deep fat fryer
 Rotisserie

However, little discussion was found in the review of literature which related to this aspect of the use of the homemaking department equipment.

CHAPTER III

DESCRIPTION OF PROCEDURES

Reviewed Certain Basic Literature

The review of literature was limited to the following:

Professional journals which included articles related to teaching.

1. Nine years of the Journal of Home Economics from January 1950 to December 1959.
2. Six years of Practical Home Economics from January 1950 to May 1957.
3. Seven years of What's New in Home Economics from January 1950 to December 1957.
4. Seven years of Forecast from January 1950 to December 1957.
5. The 1955 volume of American School and University.

Research studies in which findings about students' interests and understandings were reported.

Two research studies by Army¹³ and Van Citters¹⁴ were reviewed.

Selected professional materials in which generalizations about meals and meats were defined.

Two resources were used from which generalizations were secured:

- (1) Chadderdon's Evaluation Materials¹⁵ and
- (2) B. Lowe's Experimental Cookery.¹⁶

¹³Army, op. cit.

¹⁴Van Citters, op. cit.

¹⁵Chadderdon, op. cit.

¹⁶Lowe, op. cit.

Organized the Basic Concepts

The basic concepts secured from the above references were organized into the following six categories:

1. Trends in home economics at the secondary level.
2. Research studies which indicate student understandings and interests in meals with special reference to meats.
3. Cost of adequate food preparation in the homemaking program.
4. Conditions related to the teaching of foods.
5. Some generalizations about foods with special reference to meats.
6. The relationship of the equipment in homemaking departments to the learning experience.

Developed Criteria

A summary of basic concepts that are important in meat cookery and meal preparation was then made. From this information the writer then set up some criteria for use in the preparation of some resource materials for teachers to use in planning meat meal experiences in homemaking classes.

Developed Resource Materials

Using these criteria some suggestions for teachers to use in providing opportunities for students to have experience with meat meals were developed.

CHAPTER IV

DESCRIPTION OF RESULTS

The purposes of this study were to:

1. Summarize the evidence for providing more emphasis on meat meals in the homemaking program.
2. Define some criteria as found in the review of literature for effective instruction in "meat meals."
3. Use the criteria in developing some resource materials for homemaking teachers to use in planning meat experiences for their classes.

Progress made toward achievement of these purposes are described in three parts below.

Part I

Summary of Evidence Which Indicates Needs and Interests of High School Students for More Experiences with Meat Meals

Gaps in Students' Understandings of Meats

1. Eleventh and twelfth grade girls in the Minnesota study could not differentiate expensive and inexpensive cuts of meat.
2. Eleventh and twelfth grade girls in the Minnesota study did not know the methods of preparing different cuts of meat to obtain a palatable product.
3. The Minnesota and Michigan studies indicated that the girls knew little about selecting meats.

Interests of Students in Studying Meats

1. In both the Minnesota and Michigan studies the girls were particularly concerned with learning new things about food and its preparation and service.

2. The Michigan study indicated a need to include planning of meals within the family budget and planning meals so that they would know what to buy.
3. Both studies indicated that preparation of meats in a variety of ways ranked as one of the high student interests.

Beliefs and Recommendations of Home Economics Leaders

Leaders in home economics and/or home economics education have in various ways indicated various concerns for what is important in teaching "meat meals."

Dorothy Leahy in her article on trends in home economics points out that:

skills are basic to home economics learning, but must be put in their proper perspective. They should be a means to the end of helping the individual to develop into an efficient homemaker....

Home economics is an ever-changing program and one that must make allowances for the new happenings of our times.¹⁷

An editorial which appeared in What's New in Home Economics states that

in relation to teaching foods it is most important to remember that the method used must vary with the situation at hand. Even the term "meal-planning method" in foods teaching is open to wide variation. It is, however, a method which should provide closer correlation to real life situations.¹⁸

This editorial also states that the following essentials must be stressed in effective teaching of meals on the family basis:

1. Students must learn to cook foods skillfully.
2. They must know how to plan meals correctly.
3. They must be able to prepare and serve meals properly.¹⁹

¹⁷Leahy, op. cit., p. 269.

¹⁸"Teaching Foods Must Include These Three Essentials," op. cit., p. 74.

¹⁹Ibid.

Ailsie Stevenson has related the following in an article on planning a budget for an adequate food preparation program:

In providing for an adequate food budget economy is not obtained by skimping on the amount²⁰ of food prepared or by over-emphasizing films and demonstrations.

In an editorial which appeared in What's New in Home Economics the author states:

The problems that arise in the use of the meal-planning method are:

- a. Time.
- b. Money.
- c. Maturity of the students.
- d. Loss of basic skills.
- e. Method may be too repetitive over a three to four year period.²¹

In the report of a study done in Ohio, Hazel Price relates the following:

The length of the period does not determine to any great extent the success or failure of the meal-planning method of teaching. The determining factor is that both class and teacher manage time and equipment to good advantage.²²

Ruth Cowles and Stacey Krasnecki have reported that

The educational climate we create in our homemaking department must be one that will better equip young people to cope with the society in which they live.²³

The modern homemaking program must serve as a laboratory for home and family living. Thus the equipment of our homemaking departments must be such that this goal can be accomplished.²⁴

²⁰Stevenson, op. cit., p. 40.

²¹"Teaching Foods by the Meal-planning Method," op. cit., p. 72.

²²Price, op. cit., p. 263.

²³Cowles, op. cit., p. 273.

²⁴Krasnecki, op. cit., p. 279.

After examining the statements of Chadderton and Belle Lowe, it can be seen that there are some definite principles of meat cookery that can be used for basic guides in the preparation of all meats.

Part II

Some Criteria Selected as Important in Planning Experiences with Meat Meals

The suggestions in the following pages were based on the following assumptions:

1. Any girl in a homemaking class will be there a full year and with one teacher.
2. The room is an all-purpose room with opportunity to use the kitchens all year.
3. Spaced learning is more effective.
4. Learning is more effective when tied to a real situation.
 - a. When it is timely.
 - b. When there is social approval.
5. The school cannot develop skills in the length of time student is in class. They need to be reinforced at home.

Considering the above assumptions and after considering the concepts expressed in the literature, the writer developed the following criteria which she believed should be considered in developing suggestions for homemaking teachers in planning for and guiding experiences with "meat meals":

Students need:

1. Experiences with a variety of meat meals in all homemaking classes with more intensive work at the 11th and 12th grade levels.

2. Experiences which are challenging and up-to-date and which are related to real problems and concerns of homemakers and the students themselves (time, money, etc.).
3. Experiences with complete and partial meat meals. (This is possible by proper use of time, money and equipment.)
4. Experiences in which principles of selection and preparation are emphasized as well as the "how to do it."
5. Experiences on an individual as well as group basis.
6. Experiences which are spaced over a sufficient period of time so learning can be effective and the school food budget distributed and not excessive.
7. Experiences in their own homes which supplement those in school.
8. Experiences are broad and not limited to their own situations, resources, or customs.
9. Experiences which show them what concepts about meat they understand and/or do not understand.
10. Experiences with real materials and/or visual materials especially in the selection of meats.

Part III

Some Suggestions Developed for Homemaking Teachers in Providing Experiences with Meat Meals

The writer has developed several types of suggestions based on the criteria discussed on page 20. These are as follows:

1. Suggested objectives which appear to be defensible.
2. Suggested types of experiences indicating their relationship to the criteria.

Suggested Objectives Which Appear to be Defensible

The following objectives appear to be defensible using Tyler's
²⁵
 rationale:

Students

1. Understand the role of meat in family meals and the importance of including meat cookery in homemaking classes.
2. Have a concept of the wide range of meats on the market including the relative prices and the relative degree of tenderness and suitable methods of preparation.
3. Understand the basic methods of preparation of meats and can relate this information to produce a desirable product in terms of taste and nutrition.
4. Are able to prepare a variety of meats in school in small groups and/or demonstrations using the basic principles of meat cookery.
5. Are able to manage a variety of meat-meal situations in school and in home.

Suggested Types of Experiences Indicating Their Relation to the Criteria

Pretest students to determine what they know about meat selection and preparation before instruction. (Criterion 9)

The writer has not prepared evaluation materials for meat meals but this needs to be done for effective teaching.

Make realistic plans for types of learning experiences that are possible in homemaking classes. (Criterion 6)

²⁵
 Ralph Tyler, Basic Principles of Curriculum and Instruction,
 (Chicago: The University of Chicago Press, 1959).

The teacher will need to:

1. Know the total budget allowed her and what her expenses may be.
2. Allocate a part of the budget for foods.
3. Allocate some of this food budget to the preparation of meats and meat meals.
4. Know the available group time.

Thus the teacher will know her limitations as to money, and can plan accordingly the type of experiences that are possible in the range of her budget.

The writer proposes that instead of including all of the meat experience at one time that a teacher space these experiences throughout the year. A suggested plan for this spacing appears on page 24. In this way there will be an opportunity to introduce lessons when they are timely. In addition the students will be introduced to only a few facts at one time, but in the end they will have had wide experience with meats. (See Suggested Plan for Spacing of Meat-Fish-Poultry Lessons Throughout the Year.)

SUGGESTED PLAN FOR SPACING OF MEAT-FISH-POULTRY
LESSONS THROUGHOUT THE YEAR

<u>September</u>	<u>October</u>	<u>November</u>
1. Outdoor cookery	1. U.N. Day	1. Thanksgiving
a. Broiling	a. Foreign foods	a. Poultry
b. Barbecue		b. Ham
2. Snacks		
a. Hamburger variations		
b. Hot dog variations		
c. Sandwiches		
<u>December - February</u>	<u>March - May</u>	
1. Party meals	1. Summer meals	
a. Roasts, chops	a. Cold cuts	
b. Fish - shell	b. Salads	
2. Hearty foods	1. Meat	
a. Stewing	2. Fish	
b. Braising	c. Use of canned meats	
c. Pan broiling		
d. Casseroles		

Involve students in making decisions about the types of Experiences which would be most helpful to them. (Criteria 2, 6, 8)

The teacher and pupils should examine the types of meats available in the community and decide which ones would best furnish them with the experiences they need in selecting and preparing of meats. This could be done by using the "Meat Reporter Form" which appears on page 26.

Some suggestions as to the types of meat that might be prepared throughout the year have been listed in the spacing chart which appears below.

The teacher needs to remember that the final decisions as to what should be included must be influenced by the needs and interests of her students.

Stimulate students to study cuts of meats in local markets and to identify these cuts. (Criteria 1, 2, 4, 5)

Help the students determine what cuts of meat are available in the stores of the community. This might be accomplished by the use of a "Meat Reporter Form" which would be filled out by the individual student.

MEAT REPORTER FORM*

Name _____ Date _____

Class _____ Time _____

Store _____

Directions: List the cuts of meat available in a local store according to the following chart.

Type of Meat	Name of Cut	Price per Pound	Amount you would pay for a family of four	Total weight of the amount you would buy for four	Any other descriptive information on the label	Marbling	Describe briefly	
							Fat	Color of Meat
Beef								
Pork								
Veal								
Lamb								

*A similar form could be used for the "reporting of fish and poultry."

Involve students in setting up a display of meats in class by using labeled pictures of various cuts of meat.

The best source of such pictures is from meat charts which are offered as free material from various meat companies. These pictures might then be used in the following way:

Location of the cut on the carcass of the animal. Arrange the labeled pictures on a bulletin board according to the type of meat. Then the students may indicate their location on the carcass charts handed out to them and the degree of tenderness.

EXAMPLE OF THE BULLETIN BOARD

Beef

Pork

Lamb

Veal



Blade-End Rib Roast

(Other similar pictures would be placed under each meat category. There should be at least two pictures under each category. One should be an example of a less tender meat and one an example of a tender cut of meat.)

EXAMPLE OF CARCASS CHARTS

Beef

Name _____

CLASS _____

Directions: Look at the pictures on the bulletin board that are in the beef column. 1. Color in the section on the carcass from which each cut in the beef column comes.

Do the coloring in the following way:

- a. If the meat should be cooked by a moist method, color the section blue.
- b. If the meat should be cooked by a dry method, color the section brown.

2. Label each you have colored with:*

- a. The name of the section of the carcass.
- b. The name of the cut that is on the bulletin board that comes from that section.

*You may use your Armour Fresh Meat Study Guide as your reference.

Help students to build useful materials about the method of cooking and type of meat. (Criterion 4)

The cuts available which have been determined by the meat survey could be divided by the students with the aid of the Armour Fresh Meat Study Guide into six methods of cooking categories: roasting, broiling, stewing, pan broiling, and boiling.

Teach basic principles before, during, and after experiences with meats.
(Criterion 4)

In teaching meat cookery according to the spacing chart, page 24, the teacher will need to do the following:

Aid the students in understanding the basic principles of meat selection and cookery. This may be done through demonstration, visual materials, reading, and discussion. The basic concepts can be classified as follows:

1. Selection of meats.

There are two guides that can be used in the selection of meats.

a. Appearance.

This is judged by

- (1) conformation.
- (2) finish.
- (3) quality.

b. Grading and branding.

A consumer also needs to consider

- (1) choice of a reliable dealer.
- (2) taking advantage of lower priced cuts. When considering the price, if the number of servings per pound is considered, a lower price per pound does not always mean more economical meat.

2. Cookery of meats.

Basically there are two methods for meat cookery:

1. Dry heat.
2. Moist heat.

Dry Methods

Oven roasting--large tender cuts
 Broiling--small tender cuts
 Pan broiling, pan frying--variation of broiling

Moist Methods

Braising--less tender cuts
 Stewing--small pieces of less tender cuts
 Boiling--large less tender cuts (usually for soup)

Tenderness is affected by:

1. The age of the animal.
2. The location of the cut in the animal.
3. The amount of fat interspersed in the lean.

Use ground meat to demonstrate the basic meat cookery principles. (Criteria 3, 4, 5)

Most people are familiar with ground meat. This old familiar favorite can be used very effectively as a basis for teaching all of the basic meat cookery principles.

An example of how this can be accomplished follows:

Roasting--	meat loaves
Broiling--	meat patties
Pan broiling--	" "
Pan frying--	" "
Braising--	
Stewing--	meat balls

It is important for teachers to help students realize the variations of ground meats and fish that are available.

1. Ground beef, fresh pork, veal, lamb.
2. A combination of any of these.
3. Ham.
4. Salmon or other fish.

Involve students in observing and participating in demonstrations. (Criteria 1, 5)

It should be remembered that demonstrations are not a substitute for actual student preparation. They should be used only when individual student participation is not practical. Each demonstration must be carefully planned if optimum results are to be obtained after its completion.

There are three types of demonstrations that are possible:

- a. Teacher.
- b. Teacher-pupil.
- c. Group of students.

It may be possible for some teachers to buy roasts or other expensive cuts for demonstrations or individual student preparation and then to sell the finished product, for example to various staff members.

The function of demonstrations in meat cookery should be to emphasize the following:

The varied use of equipment in meat cookery.

1. Pressure cooker.
2. Small electrical equipment.
 - a. Fry pan.
 - b. Deep fat fryer.
 - c. Electric sauce pan or controlled surface unit on an electric or gas range.
 - d. Rotisserie.

The preparation of large and/or expensive cuts of meat.

1. Roasts.
2. Steaks.
3. Turkey.
4. Ham.
5. Lobster.

Provide individual and small group experiences in complete and partial meals. (Criterion 5)

a. In connection with each demonstration to be done in class, the students in each unit could plan a complete meal to accompany the main protein food to be demonstrated. The preparation of this could be done several days before or after the demonstration. On the day of the demonstration the protein portion of the meal would be prepared as the demonstration.

b. The class as a whole might plan a complete meal around the protein food to be demonstrated. Then each unit could prepare a portion of the accompanying foods. If time allows, it might be possible to serve this meal on the day of the demonstration.

The following demonstration would be one that would help the teacher to show her students how they could plan to make the most of the meat dollar:

MEATS

Tailored for Indoor-Outdoor Cooking

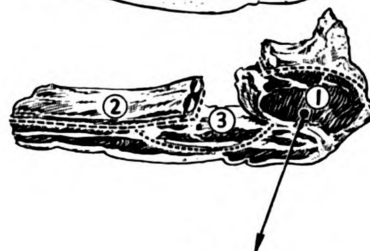
BEEF BLADE-END RIB ROAST (6th and 7th Ribs)

Three Fresh-Cooked Meals for a Family of Four

- A. Ask your retailer to saw across the ribs about 2 inches from the chine bone.



- B. At home, with ribs up and fat side on table, separate eye muscle (1) from balance of cut at natural dividing seam. Remove bones from this piece of meat, then cut into 2, 3 or 4 steaks, depending upon thickness.



- C. Run knife under rib bones (2), then under blade bone (3). The pieces of boneless meat taken from (2), (3) and (4) may be ground for patties or cut into cubes for braising. Cubes from top grade beef may be marinated and broiled. Sometimes a small rolled roast is made from (4).



Michigan State University, the Colleges of Agriculture and Home Economics and the Cooperative Extension Service provide this material for you. Michigan State University is represented in each county by a Cooperative Extension staff that provides educational services in agriculture, home economics, 4-H club work, marketing and related fields.

Encourage students to try out new ideas about meat preparation and serving.

(Criteria, 1, 2, 3, 5, 7)

Student preparation of meats as a home experience.

This experience may be one that offers the student a change for practical experience as well as one to be creative. One experience which will offer this opportunity is recipe construction.

Recipe construction.

Provide a space on the bulletin board which could be entitled "New Ideas with Meat." Students will use this space to post the recipes they construct.

Give each student doing this project a list of foods from which to work. An example of such a list is as follows:

<u>Meats</u>	<u>Vegetables</u>	<u>Dairy Products</u>
Hamburger	Tomatoes--sauce, whole	Eggs
Hot dogs	Potatoes	Milk
	Carrots	Cheese
	Cabbage	Butter
<u>Grain</u>		
Flour	<u>Your suggestions of any foods</u>	
Bread	<u>not included on this list.</u>	
Rice		
Macaroni		

Supply the following directions with this list of foods.

1. Using this suggested list of foods see what new ideas you can "dream up" for a new way of preparing one of the meats listed. The list of foods suggested is only a guide. You may add any others that you would like.

2. Write up your recipe according to the proper form and post it on the bulletin board.

3. Have some member of your family fill out question 1 on the following form. You should fill out the remaining portion.

FORM

Your name _____

Class _____

underline one

1. a. I (liked, did not like) the recipe.

b. In the following underline the description that best describes your reaction to the recipe.

Flavor--very good, fair, poor.

Appearance--attractive, passable, unattractive.

Comments:

Signed _____

2. Were you satisfied with your results? Why?

3. If not, what suggestions do you have for improvement?

4. Determine as nearly as possible the cost of your product. Describe how you determined this estimate.

5. Plan a day's menus that would include your product as the main protein food at one of the meals.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

Purposes of the Study

The purposes of the study were to:

1. Summarize the need for more emphasis in meat meals in the homemaking program.
2. Define some criteria as found in the review of literature for effective instruction in "meat meals."
3. Use the criteria in developing some resource materials for homemaking teachers to use in planning meat experiences for their classes.

Results of the Review of Literature

1. There is high student interest in gaining experience with meat selection and preparation.
2. There are indications that many of the homemaking programs of today are not meeting the needs of students in relation to experience with meats.
3. The basic reasons for teachers not providing experience with meats in homemaking classes are:

- a. The high cost of meats and the relatively limited school budget.
 - b. The length of time which is necessary to prepare meat meals and the length of the class period.
 - c. The lack of individual student experience in the preparation of meat meals.
4. There are ways that homemaking teachers can overcome the difficulties that have prevented them from including adequate meat experiences in their teaching. Two of these are:
- a. Proper management of time and equipment.
 - b. Using the basic principles of meat selection and cookery as a guide for teaching meats.

Procedure

Several volumes of five professional journals were reviewed to gain information about the conditions in a homemaking program that are important for successful pupil experiences with "meat meals."

In addition, two research studies were reviewed to identify the interests and needs of students in the preparation of "meat meals."

Finally two sources were reviewed to determine some generalizations about foods with special reference to meats.

Results

From the information reviewed, the writer set up criteria for use in the preparation of some resource materials for teachers to use in

planning meat meal experiences for their students. Then, using the criteria, some suggestions for teachers to use in providing their students with meat meal experiences were developed.

Recommendations

There are two recommendations which the writer feels it is important to stress.

1. Since each teacher must treat her individual situation according to its needs, the materials developed are not meant to be a final answer. It is hoped that they will be only a start in continued thinking on the subject.
2. It is important that these materials be used in order to see what revisions and additions are needed. In addition, continued evaluation of them will be necessary if their further development is to be of value.

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MacKean, Nancy

An exploratory attempt to clarify
the need for varied pupil experi-
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