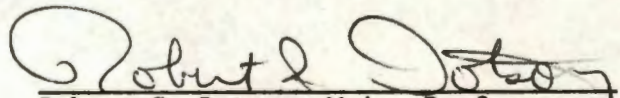


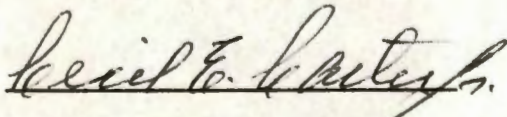
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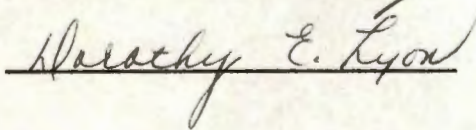
I am submitting herewith a thesis written by Mary Ross King entitled "Characteristics of and Knowledge Gained by Fourth through Ninth Grade Girls Experiencing a 4-H Club Camp Learning Center Series on Management." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Extension.

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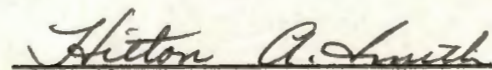

Robert S. Dotson, Major Professor

We have read this thesis and
recommend its acceptance:





Accepted for the Council:


Vice Chancellor
Graduate Studies and Research

CHARACTERISTICS OF AND KNOWLEDGE GAINED BY FOURTH THROUGH NINTH
GRADE GIRLS EXPERIENCING A 4-H CLUB CAMP LEARNING
CENTER SERIES ON MANAGEMENT

A Thesis
Presented for the
Master of Science
Degree
The University of Tennessee

Mary Ross King

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ABSTRACT

This study was concerned with the Management Learning Center materials used at District V 4-H Club Girls Camp in 1973. The purposes were to investigate certain characteristics of two groups of respondents, participants and nonparticipants, in the six unit Management Learning Center Series. Units and their subjects were as follows:

1. Unit One - Getting the Things You Want
2. Unit Two - How to Put Your Money in the Bank
3. Unit Three - This is the Way to Write a Check
4. Unit Four - Small Wonders in the Kitchen
5. Unit Five - Let's Go Shopping for Food
6. Unit Six - Pick a Snack Time Hit

Data were collected from fourth through ninth grade girls in attendance at 4-H Camp. A total of 224 pretest questionnaires were judged to be complete and accurate and were used in the analyses. For study purposes, data from the 224 respondents were studied under major headings according to the respondents': pretest scores; posttest scores; average improvement scores; and number of units completed. Also, comparison was made between 75 participants and 149 nonparticipants regarding average pre, posttest and improvement scores and the general effectiveness of the learning center technique was explored.

Most analyses were conducted in terms of numbers, percents, averages and students' t-test. The five percent level of confidence

was chosen. Computations were done with the help of The University of Tennessee Computing Center.

Major findings of the study were:

1. Higher achievers on both the pretest and the posttest were girls between the ages of eleven and thirteen who were in the sixth through the eighth grades and had been in 4-H for three or more years.
2. Higher average improvement scores were made by girls between the ages of nine and ten who were in the fourth and fifth grades and had been in 4-H for one or two years.
3. The participants made a score difference of 14.1 points (out of 100) more on the posttest than on the pretest.
4. The participants made a 17.8 point higher average score than did the nonparticipants on the posttest.
5. The participants made a slightly higher average pretest and a higher posttest score than did the nonparticipants.
6. Unit IV, Small Wonders in the Kitchen, received the highest "liked" rating.
7. There were no significant differences in the ratings of "things liked about each unit," when selected personal characteristics were studied for the six units. All units were "liked very much."
8. Those who completed one to four units tended to rate the completed units about the same as did those who completed all six units.

Conclusions and recommendations also were made.

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CHAPTER I

THE PROBLEM AND ITS SETTING

I. INTRODUCTION

Since the beginning of the 4-H Club program, one of the largest and most unique educational programs available, youth have had an opportunity for mental, physical, and social growth. The 4-H Club program, after the passage of the Smith-Lever Act in 1914, has been guided jointly by the Cooperative Extension Service of the United States Department of Agriculture and the land-grant colleges (8:3).*

Club work was being done much before this date by persons who were willing to give rural boys and girls respect for themselves and their way of life. More organized club work was conducted in the form of corn and canning clubs in the mid eighteen hundreds. In 1907 the first federally sponsored corn growing contest was conducted in Mississippi (8:4).

American youth in general, and the 4-H Club members in particular have been affected by population shifts, changing educational requirements and changing patterns and values of the farm, home, and community (8:298). In order for the 4-H program to maintain its unique appeal and make maximum use of its teaching opportunity, modifications are necessary.

*Numbers in parentheses refer to references in the alphabetically listed bibliography; those after the colon refer to page numbers.

The favorable image of 4-H throughout the nation among people in all walks of life is of inestimable value to its future. It would be advantageous for the Cooperative Extension Service to capitalize on the value of the 4-H image and help to intensify this positive image. If 4-H is to retain its incomparable, youth-serving character as an educational organization, many existing programs need to be strengthened or revised and new action programs and methods instituted (8:3).

Changes in the 4-H program need to reflect the changing needs of young people and the changing times in which they live. Skill mastery is not enough in this time, a 4-H member also needs to be able to reason "why" and "how."

Agents working with the Cooperative Extension Service have the responsibility for implementing high quality educational programs that acknowledge the tremendous potential of individual 4-H members. If this goal is to be achieved, teaching methods must remain flexible to meet ever-changing, socioeconomic conditions and needs.

A relatively new teaching method to the Tennessee 4-H Club Home Economics Camping program is the programmed instruction technique. This teaching technique was first introduced in the form of ten 4-H Clothing Learning Center units for youth attending three District (III, IV and V) camps in the summer of 1972.

A second series of six units was developed and used in the summer of 1973 in the Management Project for Camps in Districts III, IV and V. Districts I and II Camps used the clothing series developed the year before. Thus, all Tennessee Girls Camps utilized the learning center

programmed instruction technique as part of their programs in 1973. The present study concerns the development and testing of the Management Learning Center Series material used in the summer of 1973.

II. STATEMENT OF THE PROBLEM

There is a continued need to update Extension teaching methods to reach the greatest number of 4-H members possible and to teach them effectively. In order to appraise the relative value of new teaching methods, planned evaluations are requisite.

Little was known prior to the present study regarding the characteristics of and the knowledge gained by fourth through ninth grade girls experiencing the 4-H Club Camp learning center units. For this purpose the present study was designed.

III. THE NEED FOR THE STUDY

A study concerning the characteristics of the participating 4-H Club members and the effectiveness of the learning center teaching technique was needed to serve as a basis for improving such instruction in the future. A review of literature indicated that no previous study had been made concerning 4-H Home Economics learning centers in Tennessee. Therefore, the study was needed on the basis that a knowledge of certain characteristics of participating 4-H members and an evaluation of the teaching technique should prove helpful to Extension Agents as they seek to develop additional 4-H Home Economics learning center materials.

IV. PURPOSE OF THE STUDY

The major purposes of this study were to investigate certain characteristics of two groups of respondents, participants and nonparticipants, in the Management Learning Center Series during one of four weeks of District V Girls' 4-H Club Camp in the summer of 1973.

Specific objectives of the study were:

1. To characterize high and low achievers on average pretest, posttest and/or improvement scores in terms of:

Age

Grade

Place of residence

Employment of mother outside home

Number of years in 4-H

Enrollment in Management Project

Number of 4-H projects taken.

2. To characterize those participants completing all six learning center units and those completing fewer than six in terms of:

Age

Grade

Place of residence

Employment of mother outside home

Number of years in 4-H

Enrollment in Management Project

Number of 4-H projects taken.

3. To compare participants and nonparticipants on pretest, posttest and improvement scores.
4. To determine the relative effectiveness of the six individual experimental learning center units in terms of:

Pretest scores

Posttest scores

Improvement scores

Pre and Posttest average differences

Unit ratings.

V. DEFINITION OF TERMS

Respondents. For the purpose of this study, the term respondents will designate all girls at District V 4-H Club Camp during the week of July 23-27, 1973 who completed pretest questionnaires.

Participants. For the purpose of this study, the term participants will designate those respondents who in addition to completing pretests, also completed requirements for from one to six of the Management Learning Center Units and took posttests. Participation was on a voluntary basis.

Nonparticipants. For the purpose of this study, the term nonparticipants will designate those respondents who only completed pretests.

Unit. For the purpose of this study, the term Unit will refer to any of the six individual segments of the total Management Learning Center Series.

Improvement score. For the purpose of this study, the term improvement score will be used to designate the score derived by subtracting the individual's pretest score from the individual's post-test score. Because of a few cases of regression, the greatest amount being 28, this number was added to all improvement scores in order to establish a consistent zero point.

Rating. For the purpose of this study, the term rating will mean the degree to which participants "liked" each individual Management Learning Center Unit completed.

Learning center instruction technique. For the purpose of this study the term learning center instruction technique refers to the teaching method used in the study and is a combination of the programmed instruction, audiovisual and learning module theories.

CHAPTER II

REVIEW OF LITERATURE

Programmed instruction or the audiotutorial method of instruction has been used in business, industry, and education for more than ten years, but had its beginning much earlier (5:19).

John Locke (1632-1704) is reported to have approached the use of programmed teaching by using steps with manipulative skills. Later, Madame Maria Montessori (1869-1952) taught children using principles of programmed instruction (5:20). Sidney Pressey, of Ohio State University, first advocated the use of teaching machines in the 1920's.

Harvard experimental psychologist, B. F. Skinner, has been called the father of programmed instruction because of his work in the late 1940's and early 1950's. His work along with that of others during this period led to the formulation of several teaching principles which became recognizable characteristics of programmed instruction. These features were: small steps; active student involvement; immediate confirmation or reinforcement; and self-pacing (2:19).

In 1961, at Purdue University, S. N. Postlethwait began using audiotaped presentations to supplement the instruction in his freshmen botany class. This later led to the development of his audiotutorial approach which is structured around a self-instructional learning carrel. His system included objectives, a programmed audio tape, printed study

guides, visual aids and actual biological materials. This method also provides for teaching assistants who can aid students when needed (2:20).

Programmed instruction and the audiotutorial methods of instruction may be defined as a packet of teaching materials consisting of behavioral objectives, a sequence of learning activities, and provisions for evaluation (10:36).

The sequence of activities in a learning center is designed to:

1. Provide instant feedback to the learner on his
achievement
2. Proceed from lower to higher cognitive
levels
3. Contain materials with intrinsic interest for the
learner
4. Provide optional and recycling paths to achieve the
objective
5. Equip the learner to achieve the stated behavioral
objective (10:36).

Schramm (11:7) says programmed instruction is an active way for a student to study and learn for himself. It consists of a reproducible series of learning acts arranged in sequence to lead a learner efficiently from some behavior he has mastered to some new behavior which is the goal of the instruction. The basis of programmed instruction is not the equipment used to transmit the message, but the program itself.

There are several purposes for using this type of teaching method. One is to individualize instruction. Ralph W. Tyler, as quoted by Dale (3:625) says:

Essentially learning takes place through the experiences which the learner has; that is, through the reactions he makes to the environment in which he is placed. Learning takes place through the active behavior of the student; it is what he does that he learns, not what the teacher does.

Postlethwait et al. (7:1), advocates of the audiotutorial teaching system, believe that ". . . learning is an activity done by an individual and not something done to an individual." In order for the activity to be done by the individual, the experience must involve the learner.

With an individualized type of teaching method, the student can work at his own rate of speed. This pattern offers possibilities since students do not progress at the same rate.

Another reason for use of the programmed instruction and audiotutorial methods of teaching is to permit learning to occur outside the presence of the teacher. The self-teaching method was not meant to replace the teacher. The teacher will be present to offer assistance when needed but with the additional time, the teacher can offer more experiences. Lifer (4:25) quotes Dale who says ". . . it is slowly dawning on us that pupils do not need to be in the physical presence of a teacher in order to learn. You can have teaching without learning, and learning without teaching."

In order for the programmed instruction and audiotutorial methods to be successful, it is important for the teacher to plan the units

carefully. Schramm (11:10) states that the steps a teacher should use in preparing a unit should include:

1. Decide on the objective
2. Design units to lead to terminal or desired behavior
3. Plan learning experiences
4. Design evaluation process.

Robinson and Crittenden (10) say that to use this method properly may require some special training for many Extension personnel.

Edcause education is its concern, the Cooperative Extension Service is interested in learning new and better ways of teaching its clientele and staff (5:22). A study sponsored by the National Association of State Universities and Land-Grant Colleges and the United States Department of Agriculture recommended that the Extension Service should "Make the best use of available staff by utilizing new electronic teaching devices, new communications systems, and new teaching techniques (4:49)."

Extension educators are continually searching for effective techniques to produce a desired behavior. Enough similarity exists between the desired outcome of Extension education and the potential results of learning centers. Since Extension has always been and will continue to be interested in ways to achieve educational results, programmed instruction seems to offer possibilities (10:35).

This teaching technique exists in numerous forms and has been applied in a variety of settings with various subject matter (6:2). The Extension Service has used the programmed instruction method in teaching

newsletter production, feature writing, communications, photography, adult 4-H leaders and in other areas (5:18).

It is believed that any educational subject matter in which the desired behavior can be clearly specified, can be taught by the programmed method (11:16). In the area of Home Economics, Watkins (14:1) reports on a study using educational food-nutrition games in a programmed learning situation. Research work has indicated that youth can learn through games. It is a way of breaking the barrier of rigid question and answer thinking.

Watkins believes that the game method of programmed learning should be readily assimilated into 4-H project activities. The game method of teaching is compatible to the 'learning by doing' concept upon which 4-H was founded.

The results of this programmed instruction study indicate games could be a good supplement to the 4-H food-nutrition projects at all age levels. The game approach in programmed learning can serve not only as a device to motivate learning, but would be also a teaching apparatus (14:13).

Tope (13:4) in her study made a comparison of the audiotutorial method of instruction with the conventional method in a beginning college food preparation course. The purpose of her study was to determine if the audiotutorial method of instruction was worthy of consideration in the area of food preparation.

She found that students in the audiotutorial group performed as well as those in the conventional sections. The students' reaction to the audiotutorial method was generally favorable (13:91).

The results of Tope's study indicate that the audiotutorial method of instruction is worthy of consideration for college food preparation teaching (13:91).

The learning module theory offers Extension education an alternative to the traditional methods of teaching. Lifer concludes from his study with self-learning centers, that the opportunities for self instructional programs in the future appear to be unlimited and that there is a great possibility for Extension teaching (4:50).

Advocates of the programmed instruction and audiotutorial methods strongly believe that this is the style of the future. They need not be limited to formal education since their 'packageable' nature makes them usable in many different situations. With a little ingenuity and creative application they can provide learning opportunities for numerous audiences (2:28).

CHAPTER III

METHOD AND PROCEDURE

I. POPULATIONS AND SAMPLES

The population included fourth through ninth grade 4-H Club members from Campbell, Jefferson, Johnson, Loudon, Roane and Sevier Counties in attendance at Girls' 4-H Club Camp in Greeneville, Tennessee during the camp week of July 23-27, 1973. Data were secured from 264 members. Forty of the schedules were discarded because of incompleteness and inaccuracy. Of the 224 members who provided usable data for the analyses, 75 were participants and 149 were nonparticipants. The 75 who participated did so on a voluntary basis.

II. PROCEDURE

The 75 participants had an opportunity to complete from one to six of the Management Learning Center Units. Each unit was exclusive, that is it was not planned so that the completion of one depended upon another.

The units by titles were:

1. Unit One - Getting the Things You Want
2. Unit Two - How to Put Your Money in the Bank
3. Unit Three - This is the Way to Write a Check
4. Unit Four - Small Wonders in the Kitchen

5. Unit Five - Let's Go Shopping for Food

6. Unit Six - Pick a Snack Time Hit

(For description of each unit, see Appendix A.)

III. SOURCE OF DATA

The primary instrument used in gathering information was a pre and posttest questionnaire (see Appendix C). An additional, secondary device (see Appendix D) was used to collect data regarding how well respondents liked the units.

The pretest consisted of seven sections. The first section was designed to learn some background information about the 4-H member. The remaining sections were the pretests for the six individual learning center units. The pretest was completed the first day of the camp week under the supervision of an Extension Agent before any 4-H member was exposed to the learning center materials.

The six sections of the posttest were the same as for pretest on each of the individual learning center units. The appropriate section of the posttest was administered after each 4-H member completed a particular unit. The completed section was turned in immediately upon completion. The learning center operation was under the supervision of an Extension Agent at all times.

IV. ANALYSIS OF DATA

Most analyses were conducted in terms of numbers, percents and averages. Student's "t" test (12:77) was used to test significance on

selected items. The five percent level of confidence was chosen. Main comparisons were between participants and nonparticipants. Some comparisons were made with subgroups of participants.



CHAPTER IV

FINDINGS OF THE STUDY

The purpose of this chapter is to present and discuss the analyses of data relative to characteristics of 4-H Club girls experiencing the 4-H Management Learning Center Series. This will be done under the following major headings:

1. Personal Characteristics by average pretest scores.
2. Personal Characteristics by average posttest scores.
3. Personal Characteristics by average improvement scores.
4. Personal Characteristics by numbers of units completed.
5. Average pretest, posttest and improvement scores by participants and nonparticipants.
6. Effectiveness of learning center technique as teaching tool.

The series consisted of six units, namely:

1. Unit One - Getting the Things You Want
2. Unit Two - How to Put Your Money in the Bank
3. Unit Three - This is the Way to Write a Check
4. Unit Four - Small Wonders in the Kitchen
5. Unit Five - Let's Go Shopping for Food
6. Unit Six - Pick a Snack Time Hit

I. PERSONAL CHARACTERISTICS BY AVERAGE PRETEST SCORES

Comparison of Average Pretest Scores and Ages of Respondents

The data in Table I include the pretest scores of 75 participants on six 4-H Management Learning Center Units by age groups. According to data in the table, the eleven through thirteen year old participants made a very significantly higher total average score (69.1) on the pretest than the nine and ten year olds (50.7). The total average pretest score for the two groups together was 66.0. The eleven through thirteen year old participants scored very significantly higher on all individual units.

Differences between the scores on all six units and the total for the two age groups were significant at the .01 level when tested by t-test analyses. This indicates that a highly significant difference existed between the pretest scores and the ages of the participants. Those making higher pretest scores were participants in the older, eleven through thirteen year, age bracket.

Comparison of Average Pretest Scores and Grades in School

Table II shows a comparison of the pretest scores of fourth through fifth grade and sixth through eighth grade participants, averages and totals for the two groups. The participants in the sixth through eighth grades who completed the pretest had a total average score for six units of 74.2. The fourth and fifth graders had a total average score of 60.2. The total average for the two groups together was 65.9. The sixth

TABLE I

AVERAGE PRETEST SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS
AND TOTALS ACCORDING TO AGES OF RESPONDENTS

4-H Learning Center Unit Considered	Ages		
	All (N=75) Average Score	9-10 Years (N=16) Average Score	11-13 Years (N=59) Average Score
Unit One ^a Getting the Things You Want	73.4	65.0	75.4
Unit Two ^a How to Put Your Money in the Bank	65.7	49.7	70.1
Unit Three ^a This Is the Way to Write a Check	65.0	48.1	69.7
Unit Four ^a Small Wonders in the Kitchen	55.7	43.1	59.2
Unit Five ^a Let's Go Shopping for Food	66.6	44.9	72.6
Unit Six ^a Pick a Snack Time Hit	69.6	53.6	74.0
TOTAL ^a	66.0	50.7	69.1

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

TABLE II

AVERAGE PRETEST SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS AND
TOTALS ACCORDING TO GRADES IN SCHOOL OF RESPONDENTS

4-H Learning Center Unit Considered		Grade in School	
		All (N=75) Average Score	4th-5th (N=44) Average Score 6th-8th (N=31) Average Score
Unit One ^a	Getting the Things You Want	73.1	68.3 80.1
Unit Two ^a	How to Put Your Money in the Bank	65.7	59.9 74.0
Unit Three ^a	This Is the Way to Write a Check	65.0	60.5 71.6
Unit Four ^b	Small Wonders in the Kitchen	55.7	51.8 61.4
Unit Five ^a	Let's Go Shopping for Food	66.6	57.2 80.1
Unit Six ^a	Pick a Snack Time Hit	69.6	63.6 78.3
TOTAL ^a		65.9	60.2 74.2

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

through the eighth grade participants made significantly higher pretest scores on all six individual units and the total.

Differences on Units One, Two, Three, Five, Six and the total were significant at the .01 level and on Unit Four at the .05 level when tested by the t-test. Thus, there was a highly significant difference between the pretest scores and school grades of the participant. Significantly higher pretest scores were made by participants in the sixth through the eighth grades.

Comparison of Average Pretest Scores and Places of Residence

Pretest scores and places of residence of 75 participants are shown in Table III. Participants indicating farm residence achieved a total average pretest score of 72.5 while participants from other places of residence made a total average pretest score of 65.2. The total average pretest score for the two groups together was 65.9. Higher pretest scores were made on all six individual units and the total by the farm residents.

The total scores for the six units, Unit Five and Unit Six were found to be significant at the .05 level when tested by the t-test. Thus, an overall significant difference existed between the pretest scores and the participants' place of residence. Unit Two differences were highly significant and those on Unit One approached significance; while differences on Units Three and Four were not significant. Significantly higher pretest scores tended to be made by participants who indicated farm residence.

TABLE III

AVERAGE PRETEST SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS AND
TOTALS ACCORDING TO PLACES OF RESIDENCE OF RESPONDENTS

4-H Learning Center Unit Considered		Place of Residence		
		All (N=75) Average Score	Farm (N=17) Average Score	Other (N=58) Average Score
Unit One ^c	Getting the Things You Want	73.2	77.8	71.9
Unit Two ^a	How to Put Your Money in the Bank	65.9	74.5	63.2
Unit Three	This Is the Way to Write a Check	65.0	70.6	63.4
Unit Four	Small Wonders in the Kitchen	55.7	57.2	55.3
Unit Five ^b	Let's Go Shopping for Food	66.7	77.0	63.7
Unit Six ^b	Pick a Snack Time Hit	69.6	77.8	67.3
TOTAL ^b		65.7	72.5	65.2

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

Comparison of Average Pretest Scores and
Whether or Not Mothers Were Employed
Outside the Home

Table IV shows the pretest scores of 74 participants who indicated their mothers were or were not employed outside the home. Participants whose mothers were not employed outside the home made a total average pretest score of 67.5 while the participants whose mothers were employed scored 66.2. Participants whose mothers were not employed made slightly higher pretest scores on all but one, Unit Five, of the six individual units.

The differences in the scores were not significant at the required .05 level when tested by the t-test. Therefore, the mothers' employment did not appear to affect the participants' pretest scores significantly.

Comparison of Average Pretest Scores and
Numbers of Years in 4-H

Pretest scores as compared to the numbers of years in 4-H are shown in Table V. Participants who had been 4-H members for three or more years scored a total pretest average of 77.5. Participants who had been members from one to two years made a total average pretest score of 60.8. Higher pretest scores were made on all six individual units and the total by the participants who had been in 4-H for three or more years.

Differences between the groups on each of six units and on the total were found to be significant at the .01 level when tested by the t-test. Thus, a highly significant difference was found between pretest score and number of years in 4-H. Participants who had been in 4-H for three or more years tended to score higher on the pretest.

TABLE IV

AVERAGE PRETEST SCORES OF 74 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS AND
TOTALS ACCORDING TO WHETHER OR NOT MOTHER EMPLOYED OUTSIDE HOME

4-H Learning Center Unit Considered		Mother Employed Outside Home		
		All (N=74) Average Score	Yes (N=43) Average Score	No (N=31) Average Score
Unit One	Getting the Things You Want	73.3	73.0	73.8
Unit Two	How to Put Your Money in the Bank	65.7	65.2	66.4
Unit Three	This Is the Way to Write a Check	65.0	63.3	67.4
Unit Four	Small Wonders in the Kitchen	55.7	54.7	57.1
Unit Five	Let's Go Shopping for Food	64.4	66.5	66.4
Unit Six	Pick a Snack Time Hit	69.5	69.4	69.7
TOTAL		66.7	66.2	67.5

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

TABLE V

AVERAGE PRETEST SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS AND
TOTALS ACCORDING TO NUMBERS OF YEARS IN 4-H

4-H Learning Center Unit Considered	All (N=75) Average Score	Years in 4-H	
		1-2 (N=48) Average Score	3 and over (N=27) Average Score
Unit One ^a Getting the Things You Want	73.1	68.6	81.3
Unit Two ^a How to Put Your Money in the Bank	65.7	60.9	74.3
Unit Three ^a This Is the Way to Write a Check	65.0	60.0	74.0
Unit Four ^a Small Wonders in the Kitchen	55.7	50.4	65.3
Unit Five ^a Let's Go Shopping for Food	66.6	55.2	87.0
Unit Six ^a Pick a Snack Time Hit	69.0	62.5	82.3
TOTALS ^a	65.8	60.8	77.5

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

Comparison of Average Pretest Scores and Whether or Not Respondents Were Enrolled in the Management Project

Table VI shows the average pretest scores of 73 participants who responded according to whether or not they were enrolled in the 4-H Management Project. Those participants who were enrolled in the 4-H Management Project made a total average pretest score of 71.3, while those not enrolled scored 66.3. The total average for the two groups together was 67.0. The participants who were enrolled in the 4-H Management Project made the higher scores on all six individual units and the total.

However, the total difference and differences on all but Unit Three were not significant at the .05 level when tested by the t-test. Differences on Unit Three were highly significant. Information in Unit Three is included in one of the Management Project books. The girls who had taken this particular project may have influenced the score. The girls enrolled in the Management Project tended to score higher, though not significantly.

Comparison of Average Pretest Scores and Numbers of Projects Taken During '72-'73 School Year

Pretest scores as influenced by the total numbers of projects taken are shown in Table VII. Participants who took two or more projects during the '72-'73 school year made a total average score of 70.0. Participants who had taken only one project made a total average pretest score of 62.0. Thus, participants who had taken two or more projects made higher pretest scores on all six individual units and the total.

TABLE VI

AVERAGE PRETEST SCORES OF 73 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS AND TOTALS
 ACCORDING TO WHETHER OR NOT RESPONDENTS WERE ENROLLED IN THE
 MANAGEMENT PROJECT

4-H Learning Center Unit Considered		All (N=73) Average Score	Enrolled in Project	
			Yes (N=11) Average Score	No (N=62) Average Score
Unit One	Getting the Things You Want	73.1	76.5	72.5
Unit Two	How to Put Your Money in the Bank	66.2	72.0	65.2
Unit Three ^a	This Is the Way to Write a Check	65.0	75.5	63.2
Unit Four	Small Wonders in the Kitchen	55.9	58.0	55.6
Unit Five	Let's Go Shopping for Food	67.0	74.5	65.7
Unit Six	Pick a Snack Time Hit	69.9	73.9	69.2
TOTAL		67.0	71.3	66.3

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

TABLE VII

AVERAGE PRETEST SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS AND
TOTALS ACCORDING TO NUMBERS OF PROJECTS TAKEN DURING
'72-'73 SCHOOL YEAR

4-H Learning Center Unit Considered		Number 4-H Projects Taken '72-'73	
		1 (N=30) Average Score	2 or more (N=45) Average Score
Unit One	Getting the Things You Want	73.2	74.2
Unit Two ^c	How to Put Your Money in the Bank	65.7	68.6
Unit Three ^a	This is the Way to Write a Check	65.0	70.0
Unit Four ^b	Small Wonders in the Kitchen	55.7	59.9
Unit Five	Let's Go Shopping for Food	66.7	68.0
Unit Six	Pick a Snack Time Hit	69.6	72.0
TOTAL ^b		65.9	70.0

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

The total difference for six units and the difference on Unit Four were found to be significant at the .05 level when tested by the t-test. Differences on Unit Three were highly significant and approached significance on Unit Two. Those on Unit One, Five and Six were not significant. The number of projects taken, then, was a significant factor influencing the participants' pretest score. The participants who had taken two or more projects during the '72-'73 school year tended to achieve higher pretest scores.

II. PERSONAL CHARACTERISTICS AND AVERAGE POSTTEST SCORES

Comparison of Average Posttest Scores and Ages of Respondents

Table VIII presents data relative to differences in posttest scores and ages of respondents. The eleven through thirteen year old group made a total average posttest score of 82.1. This was higher than the 71.9 average score made by the nine and ten year old group. The total average posttest score for the two groups combined was 79.9. The eleven through thirteen age group also scored higher on each and all six individual units.

The t-test indicated differences on the total average scores and on Unit Three to be significant at the .10 level but not at the required .05 level; while differences on Units Two and Four were significant. Those on Units One, Five and Six were not significant. The difference between the posttest scores and ages were found to approach but not

TABLE VIII

AVERAGE POSTTEST SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS
AND TOTALS ACCORDING TO AGES OF RESPONDENTS

4-H Learning Center Unit Considered		Ages		
		All Average No. Score	9-10 Years Average No. Score	11-13 Years Average No. Score
Unit One	Getting the Things You Want	37 84.6	6 74.3	31 85.5
Unit Two ^b	How to Put Your Money in the Bank	39 79.0	6 65.0	33 81.7
Unit Three ^c	This Is the Way to Write a Check	42 85.1	10 76.0	32 88.5
Unit Four ^b	Small Wonders in the Kitchen	39 79.8	11 68.8	28 84.1
Unit Five	Let's Go Shopping for Food	31 90.0	7 84.0	24 91.5
Unit Six	Pick a Snack Time Hit	39 85.5	8 78.4	31 87.4
TOTAL ^{c*}		75 79.9	16 71.9	59 82.1

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six completed all six units. Six were 9-10 years, while twenty were 11-13 years. Totals do not add up since participants could take more than one unit.

attain significance. The older participants tended to make higher posttest scores, though significantly in only two cases.

Comparison of Average Posttest Scores and Grades in School

As seen in Table IX, the sixth through eighth grade participants made a total average posttest score of 88.4 whereas, the fourth and fifth graders scored 79.4. The total average posttest score for the two groups combined was 84.0. Higher scores also were made by the sixth through eighth grades on all six individual units.

Differences on Unit Three were found to be significant at the .01 level, on Unit Four at the .05 level and on Unit One at the .10 level when tested by the t-test. Differences on Units Two, Five and Six and for the total were not significant. The difference between posttest scores and grade of respondent was found to somewhat correlate. Sixth through eighth grade participants tended to score higher on their posttest, though significantly in only two cases.

Comparison of Average Posttest Scores and Places of Residence

The data in Table X pertain to the differences in posttest scores and places of residence. Participants indicating farm residence made a total average posttest score of 88.6. Those with other places of residence scored 82.2. The combined total average posttest score for the two groups was 83.0.

Differences on the scores for Unit Five were found to be significant at the .01 level and Unit Four at the .05 level when tested by the

TABLE IX

AVERAGE POSTTEST SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS
AND TOTALS ACCORDING TO GRADES IN SCHOOL OF RESPONDENTS

4-H Learning Center Unit Considered		Grade in School		
		All Average No. Score	4th-5th Average No. Score	6th-8th Average No. Score
Unit One ^c	Getting the Things You Want	37 83.9	21 80.7	16 87.8
Unit Two	How to Put Your Money in the Bank	39 79.7	18 75.3	21 82.4
Unit Three ^a	This is the Way to Write a Check	42 85.5	21 78.0	21 93.0
Unit Four ^b	Small Wonders in the Kitchen	39 79.8	23 75.0	16 86.4
Unit Five	Let's Go Shopping for Food	31 89.5	16 86.9	15 93.0
Unit Six	Pick a Snack Time Hit	39 85.2	22 82.4	17 89.3
TOTAL*		75 84.0	44 79.4	31 88.4

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six completed all six units. Thirteen were 4th-5th graders, and thirteen were 6th-8th graders. Totals do not add up since participants could take more than one unit.

TABLE X

AVERAGE POSTTEST SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS
AND TOTALS ACCORDING TO PLACES OF RESIDENCE OF RESPONDENTS

4-H Learning Center Unit Considered		Place of Residence		
		All Average No. Score	Farm Average No. Score	Other Average No. Score
Unit One	Getting the Things You Want	37 85.1	11 84.1	26 85.6
Unit Two	How to Put Your Money in the Bank	39 79.1	9 86.3	30 77.0
Unit Three	This Is the Way to Write a Check	42 85.5	13 84.7	29 85.9
Unit Four ^b	Small Wonders in the Kitchen	39 79.9	8 89.5	31 77.5
Unit Five ^a	Let's Go Shopping for Food	31 89.8	9 97.7	22 86.6
Unit Six	Pick a Snack Time Hit	39 85.1	9 92.3	30 83.0
TOTAL*		75 83.0	17 88.6	58 82.2

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six completed all six units. Eight were of farm residence, while eighteen were of other residence. Totals do not add up since participants could take more than one unit.

t-test. Though participants of farm residence tended to make higher posttest scores on the total and on all units excepting Units One and Three, differences were significant on only Units Four and Five.

Comparison of Average Posttest Scores and Whether or Not Mothers were Employed Outside the Home

Reference to Table XI discloses that participants whose mothers were employed outside the home made a total average posttest score of 83.8. Participants whose mothers were not employed outside the home scored 81.8. The total average posttest score for the two groups together was 83.0.

The t-test analyses showed the difference between respondents' posttest score and mothers' employment not to be significant at the required .05 level of confidence on any of the units or the total. While those with mothers who worked outside the home scored higher on Units One, Four, Five, Six and the total, the others scored higher on Units Two and Three.

Comparison of Average Posttest Scores and Numbers of Years in 4-H

According to figures in Table XII, participants who had been in 4-H for three or more years made a total average posttest score of 87.3. Those who had been 4-H members for only one or two years scored 78.8. The total average posttest score for the two groups together was 81.6. Higher posttest scores also were made on all six individual units by the participants who had been in 4-H for three or more years.

TABLE XI

AVERAGE POSTTEST SCORES OF 74 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS AND TOTALS ACCORDING TO WHETHER OR NOT MOTHER EMPLOYED OUTSIDE HOME

4-H Learning Center Unit Considered		Mother Employed Outside Home			
		All Average No. Score	Yes Average No. Score	No Average No. Score	
Unit One	Getting the Things You Want	36 83.4	23 84.5	13 81.7	
Unit Two	How to Put Your Money in the Bank	38 78.9	27 77.4	11 82.8	
Unit Three	This is the Way to Write a Check	41 85.1	23 84.7	18 85.7	
Unit Four	Small Wonders in the Kitchen	38 79.4	23 81.7	15 75.9	
Unit Five	Let's Go Shopping for Food	30 89.7	20 90.9	10 87.4	
Unit Six	Pick a Snack Time Hit	38 82.9	22 86.0	16 85.1	
TOTAL*		74 83.0	43 83.8	31 81.8	

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six completed all six units. Sixteen participants' mothers were employed, while nine were not employed. Totals do not add up since participants could take more than one unit.

TABLE XII

AVERAGE POSTTEST SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS
AND TOTALS ACCORDING TO NUMBERS OF YEARS IN 4-H

4-H Learning Center Unit Considered	All Average No. Score	Years in 4-H		
		1-2 Average No. Score	3 and over Average No. Score	
Unit One ^a Getting the Things You Want	37 83.7	22 78.7	15 91.1	
Unit Two ^b How to Put Your Money in the Bank	39 71.4	22 74.7	17 84.8	
Unit Three ^a This Is the Way to Write a Check	42 85.5	24 79.1	18 94.1	
Unit Four ^b Small Wonders in the Kitchen	39 79.6	23 75.3	16 86.0	
Unit Five ^a Let's Go Shopping for Food	31 89.8	18 85.6	13 95.7	
Unit Six ^a Pick a Snack Time Hit	39 85.5	23 80.8	16 92.3	
TOTALS ^{b*}	75 81.6	48 78.8	27 87.3	

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six completed all six units. Fourteen had been in 4-H 1-2 years, while twelve had been in 3 or more years. Totals do not add up since participants could take more than one unit.

The total difference was found to be significant at the .05 level as were differences on Units Two and Four when tested by the t-test. Differences on Units One, Three, Five and Six were highly significant. Thus, the difference between posttest scores and number of years in 4-H was found to be significant. Those participants who had been in 4-H for three or more years tended to make significantly higher posttest scores.

Comparison of Average Posttest Scores and Whether or Not Respondents Were Enrolled in the Management Project

Table XIII indicates that participants enrolled in the 4-H Management Project made a total average posttest score of 86.0 while those not enrolled scored 83.5. The total average for the two groups together was 83.9. Those who were enrolled in the 4-H Management Project scored higher on all but one, Unit Six, of the six individual units.

The t-tests of significance showed the difference between posttest scores and enrollment in the 4-H Management Project were not significant at the required .05 level of confidence. Significance was approached on Units Two and Three.

Comparison of Average Posttest Scores and Numbers of Projects Taken During '72-'73 School Year

A study of data in Table XIV shows that participants taking two or more projects made a total average posttest score of 85.0. Those who had taken only one project scored 80.7. The total average for the two groups together was 83.7. The participants who had taken two or more projects scored higher on all but one, Unit Six, of the six individual units.

TABLE XIII

AVERAGE POSTTEST SCORES OF 73 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS AND TOTALS
ACCORDING TO WHETHER OR NOT RESPONDENTS WERE ENROLLED IN THE MANAGEMENT PROJECT

4-H Learning Center Unit Considered		Enrolled in Project		
		All Average No. Score	Yes Average No. Score	No Average No. Score
Unit One	Getting the Things You Want	36 84.2	7 87.0	29 83.6
Unit Two ^c	How to Put Your Money in the Bank	38 79.8	7 86.4	31 78.4
Unit Three ^c	This Is the Way to Write a Check	40 85.5	6 95.0	34 83.9
Unit Four	Small Wonders in the Kitchen	39 79.3	7 80.0	32 79.2
Unit Five	Let's Go Shopping for Food	30 89.7	5 91.6	25 89.4
Unit Six	Pick a Snack Time Hit	39 86.3	8 80.1	31 88.0
TOTAL*		73 83.9	11 86.0	62 83.5

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six completed all six units. Five were enrolled in the project, while twenty were not. Totals do not add up since participants could take more than one unit.

TABLE XIV

AVERAGE POSTTEST SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS AND TOTALS ACCORDING TO NUMBERS OF PROJECTS TAKEN DURING '72-'73 SCHOOL YEAR

4-H Learning Center Unit Considered		Number 4-H Projects Taken '72-'73		
		All Average No. Score	1 Average No. Score	2 or more Average No. Score
Unit One	Getting the Things You Want	37 83.7	12 83.1	25 84.0
Unit Two	How to Put Your Money in the Bank	39 79.1	11 77.3	28 79.9
Unit Three	This Is the way to Write a Check	42 85.5	14 84.5	28 86.0
Unit Four	Small Wonders in the Kitchen	39 79.8	13 74.7	26 82.4
Unit Five	Let's Go Shopping for Food	31 89.8	9 91.4	22 89.2
Unit Six	Pick a Snack Time Hit	39 85.6	10 74.7	29 89.4
TOTAL*		75 83.7	30 80.7	45 85.0

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six completed all six units. Six had taken one project, while twenty had taken two or more. Totals do not add up since participants could take more than one unit.

T-tests of significance showed differences on posttest scores not to be significant at the required .05 level of confidence on any of the units or the total. Thus, though those with two or more projects tended to score higher than others, it was not significantly so.

III. PERSONAL CHARACTERISTICS AND AVERAGE IMPROVEMENT SCORES

Comparison of Average Improvement Scores and Ages of Respondents

Review of the data in Table XV discloses the difference in average improvement scores and the ages of the respondent. The nine and ten year old participants made a total average improvement score of 54.7 and the eleven through thirteen age group 44.3. The average for the two groups together was 44.7.

The differences on Units Four and Five were found to be significant at the .05 level when tested by the t-test. Thus, nine and ten year olds tended to show more improvement between the pretest and posttest scores than did the eleven through thirteen year olds, though significantly so on only two units.

Comparison of Average Improvement Scores and Grades in School

Table XVI shows the difference in the average improvement score and grade in school of respondent. The fourth and fifth grade participants made a total average improvement score of 49.0 while the sixth through the eighth graders scored 41.1. The average for the two groups together was 45.2. Scores were higher on all six units for fourth and fifth

TABLE XV

AVERAGE IMPROVEMENT SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS
AND TOTALS ACCORDING TO AGES OF RESPONDENTS

4-H Learning Center Unit Considered		Ages		
		All Average No. Score	9-10 Years Average No. Score	11-13 Years Average No. Score
Unit One	Getting the Things You Want	37 41.7	6 44.3	31 41.3
Unit Two	How to Put Your Money in the Bank	39 37.8	6 37.3	33 37.9
Unit Three	This Is the Way to Write a Check	42 44.7	10 54.0	32 45.8
Unit Four ^b	Small Wonders in the Kitchen	39 48.4	11 59.4	28 44.1
Unit Five ^b	Let's Go Shopping for Food	31 53.2	7 72.0	24 47.8
Unit Six	Pick a Snack Time Hit	39 44.2	9 51.6	30 42.0
TOTAL*		75 44.7	16 54.7	59 44.3

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six participants completed all six units. Six were 9-10 years, while twenty were 11-13 years. Totals do not add up since participants could take more than one unit.

TABLE XVI

AVERAGE IMPROVEMENT SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS
AND TOTALS ACCORDING TO GRADES IN SCHOOL OF RESPONDENTS

4-H Learning Center Unit Considered		Grade in School		
		All Average No. Score	4th-5th Average No. Score	6th-8th Average No. Score
Unit One	Getting the Things You Want	37 41.8	21 45.8	16 36.6
Unit Two	How to Put Your Money in the Bank	39 37.7	18 37.9	21 37.7
Unit Three	This Is the Way to Write a Check	42 47.7	21 49.9	21 45.6
Unit Four	Small Wonders in the Kitchen	39 48.3	23 52.1	16 43.0
Unit Five ^b	Let's Go Shopping for Food	31 53.3	16 62.1	15 43.9
Unit Six	Pick a Snack Time Hit	39 44.1	22 47.5	17 39.9
TOTAL*		75 45.2	44 49.0	31 41.1

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six participants completed all six units. Thirteen were 4th-5th graders, and thirteen were 6th-8th graders. Totals do not add up since participants could take more than one unit.

graders. Differences only on the scores for Unit Five were found to be significant at the .05 level when tested by the t-test. Thus, the fourth and fifth graders tended to greater improvement between the pre-test and posttest scores over the sixth through eighth graders, though significantly on only one unit.

Comparison of Average Improvement Scores and Places of Residence

According to data in Table XVII, the participants of other than farm residence made a total average improvement score of 45.4. The farm residents averaged 43.4. The total average for the two together was 45.2.

Differences between farm and other residents were not significant at the required .05 level when tested by the t-test, though improvement scores of the latter were somewhat higher on all cases excepting on Units Two and Six.

Comparison of Average Improvement Scores and Whether or Not Mothers Were Employed Outside the Home

Study of data in Table XVIII indicates participants whose mothers were not employed outside the home made a total average improvement score of 46.6. Participants whose mothers were employed outside the home had a total average improvement score of 44.4. The average for the two groups together was 45.2.

Differences between those with mothers employed and those not employed were not significant at the .05 level in any case when tested

TABLE XVII

AVERAGE IMPROVEMENT SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS
AND TOTALS ACCORDING TO PLACES OF RESIDENCE OF RESPONDENTS

4-H Learning Center Unit Considered		Place of Residence		
		All Average No. Scores	Farm Average No. Scores	Other Average No. Scores
Unit One	Getting the Things You Want	37 41.8	11 40.5	26 42.4
Unit Two	How to Put Your Money in the Bank	39 37.7	9 37.9	30 37.7
Unit Three	This Is the Way to Write a Check	42 47.7	13 42.6	29 50.1
Unit Four	Small Wonders in the Kitchen	39 48.3	7 47.3	32 48.6
Unit Five	Let's Go Shopping for Food	31 53.2	9 48.4	22 55.3
Unit Six	Pick a Snack Time Hit	39 44.1	9 46.1	30 43.6
TOTAL*		75 45.2	17 43.4	58 45.4

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six participants completed all six units. Eight were of farm residence, while eighteen were of other residence. Totals do not add up since participants could take more than one unit.

TABLE XVIII

AVERAGE IMPROVEMENT SCORES OF 74 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS
AND TOTALS ACCORDING TO WHETHER OR NOT MOTHER EMPLOYED OUTSIDE HOME

4-H Learning Center Unit Considered		Mother Employed Outside Home			
		All Average No. Score	Yes Average No. Score	No Average No. Score	
Unit One	Getting the Things You Want	36 41.4	23 38.6	13 46.5	
Unit Two	How to Put Your Money in the Bank	38 37.7	27 38.3	11 36.3	
Unit Three	This Is the Way to Write a Check	41 47.5	23 46.3	18 49.1	
Unit Four	Small Wonders in the Kitchen	38 47.8	23 49.5	15 45.5	
Unit Five	Let's Go Shopping for Food	30 53.9	20 51.4	10 59.0	
Unit Six	Pick a Snack Time Hit	38 44.6	22 44.5	16 44.8	
TOTAL*		74 45.2	43 44.4	31 46.6	

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six participants completed all six units. Sixteen participants' mothers were employed, while nine were not employed. Totals do not add up since participants could take more than one unit.

by the t-test. While the former scored higher on Units Two and Four, the latter were higher on all other units and the total.

Comparison of Average Improvement Scores and Numbers of Years in 4-H

Table XIX discloses the difference in average improvement scores and numbers of years in 4-H. Participants who had been 4-H members for one or two years made a total average improvement score of 47.9 while those who had been members three or more years scored 41.6. The average for the two groups together was 45.2. Averages on all units except Unit Two were higher for those with fewer years.

The mean score differences for Unit Five were found to be highly significant at the .01 level when tested by the t-test. Participants who had been 4-H members for one or two years tended to make more improvement between the pretest and posttest results than did those who had been members for three or more years, though significantly on only one unit.

Comparison of Average Improvement Scores and Whether or Not Respondents Were Enrolled in the Management Project

Table XX indicates that participants who were not enrolled in the 4-H Management Project made a total average improvement score of 46.3 while those who were enrolled scored 39.6. The average for the two groups together was 44.9. Those not enrolled made the greatest improvement on all six units.

TABLE XIX

AVERAGE IMPROVEMENT SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS
AND TOTALS ACCORDING TO NUMBERS OF YEARS IN 4-H

4-H Learning Center Unit Considered	All Average No. Score	Years in 4-H		
		1-2 Average No. Score	3 and over Average No. Score	
Unit One Getting the Things you Want	37 41.8	22 42.5	15 40.9	
Unit Two How to Put Your Money in the Bank	39 37.7	22 36.4	17 39.6	
Unit Three This is the Way to Write a Check	42 47.7	24 48.8	18 46.3	
Unit Four Small Wonders in the Kitchen	39 48.3	23 51.9	16 43.3	
Unit Five ^a Let's Go Shopping for Food	31 53.2	18 64.2	13 38.2	
Unit Six Pick a Snack Time Hit	39 44.2	24 46.5	15 40.6	
TOTAL*	75 45.2	48 47.9	27 41.6	

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six participants completed all six units. Fourteen had been in 4-H 1-2 years, while twelve had been in 3 or more years. Totals do not add up since participants could take more than one unit.

TABLE XX

AVERAGE IMPROVEMENT SCORES OF 73 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS AND
TOTALS ACCORDING TO WHETHER OR NOT RESPONDENTS WERE ENROLLED IN
THE MANAGEMENT PROJECT

4-H Learning Center Unit Considered		All Average No. Score	Enrolled in Project	
			Yes Average No. Score	No Average No. Score
Unit One	Getting the Things You Want	36 42.2	7 40.3	29 42.7
Unit Two	How to Put Your Money in the Bank	38 38.0	7 34.7	31 38.8
Unit Three	This Is the Way to Write a Check	40 46.5	6 46.3	34 48.0
Unit Four	Small Wonders in the Kitchen	39 47.7	7 45.0	32 48.4
Unit Five ^a	Let's Go Shopping for Food	30 51.5	5 39.2	25 54.0
Unit Six ^a	Pick a Snack Time Hit	39 44.4	8 34.1	31 47.2
TOTAL*		73 44.9	11 39.6	62 46.3

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six participants completed all six units. Five were enrolled in the project, while twenty were not. Totals do not add up since participants could take more than one unit.

Differences on the scores for Units Five and Six were found to be significant at the .01 level when tested by the t-test. There was some similarity between the improvement score and whether or not the participant was enrolled in the 4-H Management Project. Those participants who were not enrolled in the project tended to make greater improvement scores, though significantly on only two units.

Comparison of Average Improvement Scores and Numbers
of Projects Taken During '72-'73 School Year

A study of data in Table XXI shows that the participants who had taken one project during '72-'73 made a total average improvement score of 53.3 while those who had taken two or more projects scored 41.9. The two groups together averaged 45.3. Those with fewer projects improved more on all six units.

Differences in the mean scores on Unit Four were found to be significant at the .01 level, and those on Units Three and Five at the .05 level when tested by t-test analyses. None of the other differences were significant. Thus, participants who had taken one project tended to make greater improvement between the pretest and posttest than others, though significantly on only three units.

IV. PERSONAL CHARACTERISTICS AND NUMBERS OF UNITS COMPLETED

Comparison of Units Completed and Ages of Respondents

Table XXII shows the number of units completed by age group. Nearly two thirds (65 percent) of all participants had completed from

TABLE XXI

AVERAGE IMPROVEMENT SCORES OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT LEARNING CENTER UNITS
AND TOTALS ACCORDING TO NUMBERS OF PROJECTS TAKEN DURING '72-'73 SCHOOL YEAR

4-H Learning Center Unit Considered	All Average No. Score	Number 4-H Projects Taken '72-'73	
		1 Average No. Score	2 or more Average No. Score
Unit One	37 41.8	12 45.8	25 39.9
Unit Two	39 37.8	11 40.1	28 36.9
Unit Three ^b	42 47.7	14 58.0	28 42.6
Unit Four ^a	39 48.4	12 62.2	27 42.3
Unit Five ^b	31 53.2	9 71.0	22 46.0
Unit Six	39 44.2	10 44.3	29 44.2
TOTAL*	75 45.3	30 53.3	45 41.9

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six participants completed all six units. Six had taken one project, while twenty had taken two or more. Totals do not add up since participants could take more than one unit.

one to four of the Learning Center Units. The remainder (35 percent) had completed all six.

Sixty-six percent of the older age group completed one to four units as compared to 63 percent of the younger age group. Thus, only 37 percent of the nine and ten year old group and 34 percent of the eleven through thirteen age group completed all six units.

The mean difference was not significant at the required .05 level when tested by the t-test.

Comparison of Units Completed and Grades in School

The number of units completed by grades are shown in Table XXIII. Seventy percent of the fourth and fifth graders completed one to four units while 58 percent of the sixth through eighth grade group completed the same number of units. Therefore, 30 percent of the fourth and fifth graders and 42 percent of the sixth through eighth grades had completed all six units.

The difference in the mean numbers of units completed was not significant at the required .05 level when tested by the t-test.

Comparison of Units Completed and Places of Residence

Table XXIV shows the number of units completed by place of residence. Fifty-three percent of the farm residents completed one to four units while 69 percent of the other group completed the same number of units. Thus, forty-seven percent of the participants indicating farm residence had completed all six units as compared to 31 percent of those who lived at places other than the farm.

TABLE XXIII

NUMBERS OF SIX 4-H MANAGEMENT LEARNING CENTER UNITS COMPLETED
BY PERCENTS OF 75 PARTICIPANTS ACCORDING TO GRADES
IN SCHOOL OF RESPONDENTS*

Number of 4-H Management Learning Center Units Completed	All Participants		Grade in School			
			4th-5th		6th-8th	
	No.	Percent	No.	Percent	No.	Percent
One to Four	49	65	31	70	18	58
Six	26	35	13	30	13	42
TOTAL	75	100	44	100	41	100

*Not significant at the .05 level. The t-test was computed on the basis of mean scores of the two groups.

The difference in the mean numbers of units completed was not significant at the required .05 level when tested by the t-test.

Comparison of Units Completed and Whether or Not Mothers Were Employed Outside the Home

Table XXV shows the number of units completed and mother's employment outside the home. Two-thirds (66 percent) of all participants had completed from one to four of the Learning Center Units. The remainder (34 percent) had completed all six.

Sixty-three percent of those whose mothers were employed and 71 percent of those whose mothers were not employed completed one to four units. Thus, 37 percent of those whose mothers were employed and 59 percent of those whose mothers were not employed completed all six units.

The difference in the mean numbers of units completed was not significant at the required .05 level when tested by the t-test.

Comparison of Units Completed and Numbers of Years in 4-H

The numbers of units completed by years in 4-H is shown in Table XXVI. Seventy-one percent of the participants who had been in 4-H for one or two years as compared to 36 percent of those who had been members three or more years completed one to four units. Therefore, 29 percent of the one to two year group and 44 percent of the three years and over group completed all six units.

The difference in the mean numbers of units completed was not significant at the required .05 level when tested by the t-test.

TABLE XXV

NUMBERS OF SIX 4-H MANAGEMENT LEARNING CENTER UNITS COMPLETED BY
PERCENTS OF 74 PARTICIPANTS ACCORDING TO WHETHER
OR NOT MOTHER EMPLOYED OUTSIDE HOME*

Number of 4-H Management Learning Center Units Completed	All Participants		Mother Employed Outside Home			
			Yes		No	
	No.	Percent	No.	Percent	No.	Percent
One to Four	49	66	27	63	22	71
Six	25	34	16	37	9	29
TOTAL	74	100	43	100	31	100

*Not significant at the .05 level. The t-test was computed on the basis of mean scores of the two groups.

TABLE XXVI
 NUMBERS OF SIX 4-H MANAGEMENT LEARNING CENTER UNITS
 COMPLETED BY PERCENTS OF 75 PARTICIPANTS
 ACCORDING TO NUMBERS OF YEARS IN 4-H*

Number of 4-H Management Learning Center Units Completed	All Participants		Years in 4-H			
			1-2		3 and over	
	No.	Percent	No.	Percent	No.	Percent
One to Four	49	65	34	71	15	56
Six	26	35	14	29	12	44
TOTAL	75	100	48	100	27	100

*Not significant at the .05 level. The t-test was computed on the basis of mean scores of the two groups.

Comparison of Units Completed and Whether or Not
Respondents Were Enrolled in the Management
Project

Table XXVII shows the number of units completed and whether or not participant was enrolled in the Management Project. Two-thirds (66 percent) of all participants had completed from one to four of the Learning Center Units. The remainder (34 percent) had completed all six.

Fifty-five percent of those enrolled in the project and 68 percent of those not enrolled completed one to four units. Thus, 45 percent of those enrolled in the project and 32 percent of those not enrolled completed all six units.

The difference in the mean numbers of units completed was not significant at the required .05 level when tested by the t-test.

Comparison of Units Completed and Numbers of Projects
Taken During '72-'73 School Year

Table XXVIII shows the number of units completed and number of projects taken during '72-'73 school year. Eighty percent of those who had taken only one project and 56 percent of those who had taken two or more projects completed one to four units. Thus, 20 percent of those who had taken one project and 44 percent of those who had taken two or more projects completed all six units.

The difference in the mean numbers of units completed was not significant at the required .05 level when tested by the t-test.

TABLE XXVII

NUMBERS OF SIX 4-H MANAGEMENT LEARNING CENTER UNITS COMPLETED BY
PERCENTS OF 73 PARTICIPANTS ACCORDING TO WHETHER OR NOT
RESPONDENTS WERE ENROLLED IN THE MANAGEMENT PROJECT*

Number of 4-H Management Learning Center Units Completed	All Participants		Enrolled in Project			
			Yes		No	
	No.	Percent	No.	Percent	No.	Percent
One to Four	48	66	6	55	42	68
Six	25	34	5	45	20	32
TOTAL	73	100	11	100	62	100

*Not significant at the .05 level. The t-test was computed on the basis of mean scores of the two groups.

TABLE XXVIII

NUMBERS OF 4-H MANAGEMENT LEARNING CENTER UNITS COMPLETED BY
PERCENTS OF 75 PARTICIPANTS ACCORDING TO NUMBERS OF
PROJECTS TAKEN DURING '72-'73 SCHOOL YEAR*

Number of 4-H Management Learning Center Units Completed	All Participants		Number of 4-H Projects Taken '72-'73			
			1		2 or more	
	No.	Percent	No.	Percent	No.	Percent
One to Four	49	65	24	80	25	56
Six	26	35	6	20	20	44
TOTAL	75	100	30	100	45	100

*Not significant at the .05 level. The t-test was computed on the basis of mean scores of the two groups.

V. AVERAGE PRETEST, POSTTEST AND IMPROVEMENT SCORES
BY PARTICIPANTS AND NONPARTICIPANTS

Comparison of Average Pre and Posttest Scores of
Participants

Table XXIX shows the average pre and posttest scores and differences for each of the six Learning Center Units and total. A 14.1 point increase was made by all participants on the total average posttest score (82.0) over the total average pretest score (67.9). The greatest difference (23.9 points) between the average pre and posttest scores was made on Unit Five, Let's Go Shopping for Food. The smallest difference (9.1 points) was made on Unit Two, How to Put Your Money in the Bank.

A higher average posttest score was made on each of the six individual units as well as on the total. Differences in the mean scores of all six units and total were highly significant at the .01 level. Thus, significant improvement is again suggested on all units.

Comparison of Average Pretest Score of Participants
and Nonparticipants

Table XXX shows the average pretest scores for participants and nonparticipants and the differences for each on the six Learning Center Units and totals. The total average pretest score for the 75 participants was 66.0 as compared to 62.3 for the 149 nonparticipants. The participants made a slightly higher pretest score on each of the six individual units.

TABLE XXIX
AVERAGE PRETEST AND POSTTEST SCORES AND DIFFERENCES IN
SCORES OF 75 4-H MANAGEMENT LEARNING CENTER
PARTICIPANTS ON SIX UNITS AND TOTALS

4-H Learning Center Unit Considered	Average Posttest Score	Average Pretest Score	Difference
Unit One ^a (N=37)	83.7	71.4	12.3
Unit Two ^a (N=39)	79.1	70.0	9.1
Unit Three ^a (N=42)	85.5	67.1	18.4
Unit Four ^a (N=40)	79.9	60.5	19.4
Unit Five ^a (N=31)	89.8	65.9	23.9
Unit Six ^a (N=40)	85.4	72.4	13.0
TOTAL ^{a*} (N=75)	83.7	67.9	14.1

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six completed all six units.

TABLE XXX
AVERAGE PRETEST SCORES OF ALL PARTICIPANTS AND
NONPARTICIPANTS ON SIX 4-H MANAGEMENT
LEARNING CENTER UNITS AND TOTALS

4-H Learning Center Unit Considered	Participants* (N=75)	Nonparticipants (N=149)	Difference (N=224)
	Average Score		
Unit One ^b	73.2	68.3	4.9
Unit Two	65.7	64.6	1.1
Unit Three	65.1	61.7	3.4
Unit Four ^c	55.8	51.1	4.7
Unit Five	66.7	62.6	4.1
Unit Six	69.7	65.5	4.2
TOTAL ^b	66.0	62.3	3.7

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Average scores in this column were computed assuming that all 75 had completed each unit.

The total differences in mean scores for Unit One and the total were found to be significant at the .05 level and Unit Four approached significance. Unit Two, Three, Five and Six mean score differences were not significant.

These differences may indicate a preliminary difference of participants and nonparticipants in the subject matter or management as well as a difference in knowledge level.

Comparison of Average Posttest Scores of Participants and Nonparticipants

Table XXXI shows the average posttest scores for participants and nonparticipants and differences for each of the six individual units and totals. The participants made a total average posttest score of 79.9 as compared to 62.1 made by the nonparticipants. There was a difference of 17.8 points. Posttest scores of the latter were assumed to be the same as their pretest scores since they were not retested. The participants also scored higher on their posttest for all six individual units. The differences between the participants and nonparticipants posttest scores ranged from 14.5 to 28.8 points.

The differences in the mean scores of all six units and the totals were significant at the .01 level when tested by the t-test.

Comparison of Average Improvement Scores and Numbers of Units Completed

The data in Table XXXII are the average improvement scores according to numbers of units completed. The total average improvement score for all units was 45.3. The total average improvement score for

TABLE XXXI

AVERAGE POSTTEST SCORES OF ALL PARTICIPANTS AND
NONPARTICIPANTS ON SIX 4-H MANAGEMENT
LEARNING CENTER UNITS AND TOTALS

4-H Learning Center Unit Considered	Participants*	Nonparticipants** (N-149)*	Difference (N=224)
Average Score			
Unit One ^a (N=37)	83.7	68.3	15.4
Unit Two ^a (N=39)	79.1	64.6	14.5
Unit Three ^a (N=42)	85.5	61.7	23.8
Unit Four ^a (N=40)	79.9	51.1	28.8
Unit Five ^a (N=31)	89.8	62.6	27.2
Unit Six ^a (N=40)	85.4	65.5	19.9
TOTAL ^{a***} (N=75)	83.7	62.1	17.8

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*The number of participants completing each of the six units varied as indicated. All nonparticipants took all six parts of the posttest though they actually completed instruction for none.

**Nonparticipants took only a pretest, but it is here assumed that had they taken a posttest, it would not have differed significantly from the scores tested here.

***Twenty-six participants completed all six units.

TABLE XXXII
 AVERAGE IMPROVEMENT SCORES OF 75 PARTICIPANTS ON
 SIX 4-H MANAGEMENT LEARNING CENTER UNITS
 AND TOTALS ACCORDING TO NUMBERS
 OF UNITS COMPLETED

4-H Learning Center Unit Considered	Number Units Completed					
	No.	All Average Score	No.	1-4 Average Score	No.	6 Average Score
Unit One	37	41.8	11	45.5	26	40.3
Unit Two	39	37.8	13	37.8	26	37.8
Unit Three	42	47.8	16	46.8	26	48.4
Unit Four	39	48.4	14	47.6	25	48.8
Unit Five	31	53.3	5	67.2	26	50.6
Unit Six	39	44.2	13	40.9	26	45.8
TOTAL*	75	45.3	49	45.5	26	45.3

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*Twenty-six completed all six units.

those who completed one to four units (45.5) was nearly the same as for those who completed all six units (45.3). The greatest average improvement score was made on Unit Five, Let's Go Shopping for Food. The smallest average improvement score was made on Unit Two, How to Put Your Money in the Bank.

The differences in mean scores did not achieve the required .05 level.

VI. EFFECTIVENESS OF LEARNING CENTER TECHNIQUE AS TEACHING TOOL

Comparison of Average "Liked" Ratings and Numbers of Units Completed

Table XXXIII shows the average "liked" ratings given by participants on Learning Center Units by the number of units completed. The total average "liked" rating for all six units by all participants was 4.6 of five possible points. The total average rating for the two groups, those completing one to four units and all six units, also was 4.6 points. This indicates they liked the units "very much."

The highest average rating given to a unit by the participants was 4.7 points to Unit Four, Small Wonders in the Kitchen, by the 39 who completed it. The lowest average rating (4.5) was given to Unit Two, How to Put Your Money in the Bank, 39 completing; Unit Three, This is the Way to Write a Check, 42 completing; and Unit Five, Let's Go Shopping for Food, 31 completing.

TABLE XXXIII

AVERAGE RATINGS* OF 75 PARTICIPANTS ON SIX 4-H MANAGEMENT
LEARNING CENTER UNITS AND TOTALS ACCORDING TO
NUMBERS OF UNITS COMPLETED

4-H Learning Center Unit Considered	No.	All Average Rating	Number of Units Completed			
			1-4 Average Rating		6 Average Rating	
			No.	Rating	No.	Rating
Unit One ^b	37	4.6	11	4.8	26	4.5
Unit Two ^b	39	4.5	13	4.7	26	4.4
Unit Three	42	4.5	16	4.5	26	4.5
Unit Four	39	4.7	13	4.6	26	4.8
Unit Five	31	4.5	5	4.2	26	4.6
Unit Six	39	4.6	13	4.6	26	4.6
TOTAL	75	4.6	49	4.6	26	4.6

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*In the rating system used: 0.0 - 1.4 = Disliked very much;
1.5 - 2.4 = Disliked; 2.5 - 3.4 = Neither liked nor disliked; 3.5 - 4.4 =
Liked some; and 4.5 - 5.0 = Liked very much.

Differences in mean ratings on Units One and Two were significant at the .05 level when tested by the t-test. Differences for all other units and total were not significant. The tendency was for all to like all units "very much."

Comparison of Average "Liked" Ratings and Ages of Respondents

Data in Table XXXIV compare the average "liked" ratings of participants in two age groups according to different numbers of Learning Center Units completed. All participants gave an average "liked" rating of 4.5 points, "Liked Very Much" to the units completed. Those in the eleven through thirteen age group who had completed all six units (4.4) tended to rate all units completed slightly lower, "liked some," than the other group (4.6), "liked very much." This also resulted in a lower overall rating for the group who had completed all six units.

Differences between mean "liked" ratings were not significant at the required .05 level, though significance was approached.

Comparison of Average "Liked" Ratings and Grades in School

Table XXXV shows the average "liked" ratings of participants by grades in school and different numbers of Learning Center Units completed. All participants gave an average "liked" rating of 4.5 points, "Liked Very Much" to the units completed. Those in the sixth through the eighth grade group who had completed all six units (4.6) tended to rate all units completed higher than the fourth and fifth graders who had completed the same number of units (4.3), "liked some." The low

TABLE XXXIV

AVERAGE RATINGS* OF 75 PARTICIPANTS BY NUMBERS OF UNITS
COMPLETED ACCORDING TO AGES OF RESPONDENTS

Age	No.	All Average Rating	Number of Units Completed			
			1-4		6	
			No.	Average Rating	No.	Average Rating
9-10 Years	16	4.5	10	4.5	6	4.5
11-13 Years	59	4.5	39	4.6	20	4.4
All ^c	75	4.5	49	4.6	26	4.4

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*In the rating system used: 0.0 - 1.4 = Disliked very much;
1.0 - 2.4 = Disliked; 2.5 - 3.4 = Neither liked nor disliked;
3.5 - 4.4 = Liked some; and 4.5 - 5.0 = Liked very much.

TABLE XXXV
 AVERAGE RATINGS* OF 75 PARTICIPANTS BY NUMBERS
 OF UNITS COMPLETED ACCORDING TO GRADES
 IN SCHOOL OF RESPONDENTS

Grade in School	Number of Units Completed					
	No.	All Average Rating	No.	1-4 Average Rating	No.	6 Average Rating
4th-5th	64	4.5	31	4.6	13	4.3
6th-8th	31	4.5	18	4.5	13	4.6
All ^c	75	4.5	49	4.6	26	4.5

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*In the rating system used: 0.0 - 1.4 = Disliked very much;
 1.5 - 2.4 = Disliked; 2.5 - 3.4 = Neither liked nor disliked;
 3.5 - 4.4 = Liked some; and 4.5 - 5.0 = Liked very much.

average rating given by the fourth and fifth graders resulted in a lower average "liked" rating for those who had completed all six units.

Differences between mean "liked" ratings were not significant at the required .05 level, but significance was approached.

Comparison of Average "Liked" Ratings and Places of Residence

Table XXXVI shows the average "liked" ratings of participants by place of residence and different numbers of Learning Center Units completed. All participants gave an average "liked" rating of 4.5 points, "Liked Very Much" to the units completed. Participants of farm and other residence who completed one to four units gave a higher rating of 4.6 points as compared to 4.4 points, "liked some" for those who had completed all six units.

Differences between mean "liked" ratings were not significant at the required .05 level, though significance was approached.

Comparison of Average "Liked" Ratings and Whether or Not Mothers Were Employed Outside the Home

Data in Table XXXVII compare the average "liked" ratings of participants by mother's employment according to different numbers of Learning Center Units completed. All participants gave an average "liked" rating of 4.5 points, "Liked Very Much" to the units completed. Participants in both groups whose mothers were not employed tended to rate the units higher than the participants whose mothers were employed. Those whose mothers were not employed who completed one to four units gave a higher average rating (4.7) than those who completed all six

TABLE XXXVI
AVERAGE RATINGS* OF 75 PARTICIPANTS BY NUMBERS OF UNITS
COMPLETED ACCORDING TO PLACES OF RESIDENCE

Place of Residence	Number of Units Completed					
	All		1-4		6	
	No.	Average Rating	No.	Average Rating	No.	Average Rating
Farm	17	4.5	9	4.6	8	4.4
Other	58	4.5	40	4.6	18	4.4
All ^c	75	4.5	49	4.6	26	4.4

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*In the rating system used: 0.0 - 1.4 = Disliked very much;
1.5 - 2.4 = Disliked; 2.5 - 3.4 = Neither liked nor disliked;
3.5 - 4.4 = Liked some; and 4.5 - 5.0 = Liked very much.

TABLE XXXVII
 AVERAGE RATINGS* OF 74 PARTICIPANTS BY NUMBERS OF
 UNITS COMPLETED ACCORDING TO WHETHER OR
 NOT MOTHER EMPLOYED OUTSIDE HOME

Mother Employed	Number of Units Completed					
	No.	All Average Rating	No.	1-4 Average Rating	No.	6 Average Rating
Yes	33	4.5	27	4.5	6	4.4
No	31	4.6	22	4.7	9	4.5
All ^c	74	4.5	49	4.6	25	4.4

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*In the rating system used: 0.0 - 1.4 = Disliked very much;
 1.5 - 2.4 = Disliked; 2.5 - 3.4 = Neither liked nor disliked;
 3.5 - 4.4 = Liked some; and 4.5 - 5.0 = Liked very much.

units (4.5). This resulted in a lower overall rating for the group who had completed all six units.

Differences between mean "liked" ratings were not significant at the required 0.5 level, though it was approached.

Comparison of Average "Liked" Ratings and Numbers of Years in 4-H

Table XXXVIII shows the average "liked" ratings of participants by years in 4-H and different numbers of Learning Center Units completed. All participants gave an average "liked" rating of 4.5 points, "Liked Very Much" on the Units completed. Those who had been members one to two years and had completed all six units tended to rate all units completed slightly lower (4.3) than those who completed one to four units (4.6). This resulted in a lower overall rating (4.4) for the group who had completed all six units.

Differences between mean "liked" ratings were not significant at the required .05 level, though significance was approached.

Comparison of Average "Liked" Ratings and Whether or Not Respondents Were Enrolled in the Management Project

Data in Table XXXIX compare the average "liked" ratings of participants by enrollment in the 4-H Management Project and different numbers of Learning Center Units completed. All participants gave an average "liked" rating of 4.5 points, "Liked Very Much" to the units completed. Participants enrolled in the Management Project who had completed all six units tended to give a slightly higher rating (4.5) than

TABLE XXXVIII

AVERAGE RATINGS* OF 75 PARTICIPANTS BY NUMBERS OF UNITS
COMPLETED ACCORDING TO NUMBERS OF YEARS IN 4-H

Years in 4-H	No.	All Average Rating	Number of Units Completed			
			No.	1-4 Average Rating	No.	6 Average Rating
1-2	48	4.5	34	4.6	14	4.3
3 and over	27	4.6	15	4.6	12	4.5
All ^c	75	4.5	49	4.6	26	4.4

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*In the rating system used: 0.0 - 1.4 = Disliked very much;
1.5 - 2.4 = Disliked; 2.5 - 3.4 = Neither liked nor disliked;
3.5 - 4.4 = Liked some; and 4.5 - 5.0 = Liked very much.

TABLE XXXIX

AVERAGE RATINGS* OF 73 PARTICIPANTS BY NUMBERS OF UNITS
COMPLETED ACCORDING TO WHETHER OR NOT RESPONDENTS
WERE ENROLLED IN THE MANAGEMENT PROJECT

Enrolled in Project	Number of Units Completed					
	All		1-4		6	
	No.	Average Rating	No.	Average Rating	No.	Average Rating
Yes	11	4.6	6	4.6	5	4.5
No	62	4.5	42	4.6	20	4.4
All ^c	73	4.5	48	4.6	25	4.4

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*In the rating system used: 0.0 - 1.4 = Disliked very much;
1.5 - 2.4 = Disliked; 2.5 - 3.4 = Neither liked nor disliked;
3.5 - 4.4 = Liked some; and 4.5 - 5.0 = Liked very much.

those not enrolled in the project (4.4). A higher rating (4.6) was given in both project groups by those completing one to four units than by those who had completed all six units.

Differences between mean "liked" ratings were not significant at the required .05 level, though significance was approached.

Comparison of Average "Liked" Ratings and Numbers of Projects Taken During '72-'73 School Year

Table XL shows the average "liked" ratings of participants by numbers of 4-H projects taken and different numbers of Learning Center Units completed. All participants gave an average "liked" rating of 4.5 points, "Liked Very Much" to the units completed. Participants who had taken only one and those who had taken two or more 4-H projects during the '72-'73 school year and had completed one to four units gave a higher "liked" rating of 4.6 points as compared to 4.4 points for those who had completed all six units.

Differences between mean "liked" ratings were not significant at the required .05 level.

TABLE XL
AVERAGE RATINGS* OF 75 PARTICIPANTS BY NUMBERS OF UNITS
COMPLETED ACCORDING TO NUMBERS OF PROJECTS
TAKEN DURING '72-'73 SCHOOL YEAR

Number 4-H Projects Taken '72-'73	No.	All Average Rating	Number of Units Completed			
			1-4		6	
			No.	Average Rating	No.	Average Rating
1	30	4.6	24	4.6	6	4.4
2 or more	45	4.5	25	4.6	20	4.4
All ^c	75	4.5	49	4.6	26	4.4

^aMean differences were significant at the .01 level (t-test).

^bMean differences were significant at the .05 level (t-test).

^cMean differences were significant at the .10 level (t-test).

*In the rating system used: 0.0 - 1.4 = Disliked very much;
1.5 - 2.4 = Disliked; 2.5 - 3.4 = Neither liked nor disliked;
3.5 - 4.4 = Liked some; and 4.5 - 5.0 = Liked very much.

CHAPTER V

SUMMARY OF MAJOR FINDINGS, IMPLICATIONS AND RECOMMENDATIONS

I. PURPOSES AND SPECIFIC OBJECTIVES

The major purposes of this study were to investigate certain characteristics of two groups of respondents, participants and nonparticipants, in the six-unit Management Learning Center Series presented during the week of July 23-27, 1973 at Girls' 4-H Club Camp at Greeneville, Tennessee.

Specific objectives of the study were:

1. To characterize high and low achievers on average pretest, posttest and/or improvement scores in terms of:

Age

Grade

Place of residence

Employment of mother outside home

Number of years in 4-H

Enrollment in Management Project

Number of 4-H projects taken.

2. To characterize those participants completing all six learning center units and those completing fewer than six in terms of:

Age

Grade

Place of residence...
Employment of mother outside home
Number of years in 4-H
Enrollment in Management Project
Number of 4-H projects taken.

3. To compare participants and nonparticipants on pretest, posttest and improvement scores.
4. To determine the relative effectiveness of the six individual experimental learning center units in terms of:

Pretest scores
Posttest scores
Improvement scores
Pre and Posttest average differences
Unit ratings.

II. METHOD OF INVESTIGATION

For study purposes, the population and sample included the 224 4-H Club girls who completed pretest questionnaires. Seventy-five were participants and 149 nonparticipants. The study design was experimental and compared scores of the two groups before and after instruction and, also, looked at improvement.

III. METHOD OF ANALYSIS

Most analyses were conducted in terms of numbers, percents and averages. Student's "t" test (12:77) was used to test significance on

selected items. The five percent level of confidence was chosen. Main comparisons were between participants and nonparticipants. A number of comparisons were made with subgroups of participants.

IV. MAJOR FINDINGS

Comparison of Average Pretest Scores of Participants and Selected Personal Characteristics

1. The eleven through thirteen year old participants scored very significantly higher on the pretest than did the nine and ten year olds.
2. The sixth through eighth grade participants scored very significantly higher on the pretest than did the fourth and fifth graders.
3. The participants of farm residence scored significantly higher on the pretest than did the nonfarm residents.
4. There was not a significant difference between the mothers' employed and not employed outside the home on the pretest score.
5. The participants who had been 4-H members for three or more years scored very significantly higher on the pretest than did those who had been members only one or two years.
6. There was not a significant difference between mean pretest scores of those enrolled and not enrolled in the Management Project.
7. The participants who took two or more projects during the '72-'73 school year scored significantly higher on the pretest than did those who took one project.

Comparison of Average Posttest Scores of Participants
and Selected Personal Characteristics

1. The eleven through thirteen year old participants' posttest scores approached significance in being higher than those of the nine and ten year olds.
2. Sixth through eighth grade participants tended to score higher on their posttest, than did the fourth and fifth graders, though significantly on only two units.
3. Participants of farm residence tended to score higher on their posttest, than did nonfarm residents, though significantly on only two units.
4. There was not a significant difference between mean posttest scores of mothers employed and not employed outside the home.
5. The participants who had been 4-H members for three or more years scored significantly higher on the posttest than did those who had been members for one or two years.
6. There was not a significant difference between those enrolled and not enrolled in the Management Project on the posttest score.
7. The participants who took two or more projects during the '72-'73 school year scored higher though not significantly on the posttest than did those who took one.

Comparison of Average Improvement Scores of Participants
and Selected Personal Characteristics

1. The nine and ten year old participants tended to make higher average improvement scores, than did the eleven through thirteen year olds, though significantly so on only two units.
2. The fourth and fifth grade participants tended to make higher average improvement scores, than did the sixth through eighth graders, though significantly so on only one unit.
3. The average improvement scores of the participants of farm residence were not found to be significantly greater than the others.
4. There was not a significant difference between mothers employed and not employed outside the home on average improvement score.
5. Participants who had been 4-H members for one or two years tended to make higher average improvement scores, than did those who had been members for three or more years, though significantly so on only one unit.
6. The participants who were not enrolled in the Management Project tended to make higher average improvement scores though significantly on only two units.
7. Participants who had taken only one project tended to make greater average improvement scores than did those who took two or more projects, though significantly so on only three units.

Comparison of Numbers of Units Completed by Participants
and Selected Personal Characteristics

A total of twenty-six participants completed all six units. Larger percents of the following groups constituted those completing all:

1. Sixth through eighth grade participants.
2. Participants of farm residence.
3. Those whose mothers were employed outside the home.
4. Participants who had been 4-H members for three or more years.
5. Participants enrolled in the Management Project.
6. Participants who had taken two or more projects during the '72-'73 school year.

Comparison of Participants and Nonparticipants on
Average Pretest, Posttest and Improvement
Scores

1. The participants made an average score difference of 14.1 points more on the posttest than on the pretest.
2. The participants made a 17.8 point higher average score than did the nonparticipants on the posttest. (For study purposes it was assumed the latter group had made comparable pre and posttests scores, though only one test was completed by nonparticipants.)
3. The participants made a slightly higher average pretest and significantly higher posttest score than did the nonparticipants.

Effectiveness of the Management Learning Center Units
as a Teaching Tool

1. Unit IV, Small Wonders in the Kitchen, received the highest "liked" rating.
2. There were no significant differences in the ratings of "things liked about each unit," when selected personal characteristics were studied for the six units.
3. Those who completed one to four units tended to rate the completed units about the same as did those who completed all six units.
4. All six units were liked "very much."

V. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study and the writer's experience and views, the following conclusions were drawn and recommendations made:

1. Since higher achievers on both the pretest and posttest were girls between the ages of eleven and thirteen years, who were in the sixth through the eighth grades and had been in 4-H for three or more years, it is concluded that older girls performed better on the present Management Series. This suggests that consideration should be given to planning 4-H learning center educational series of units for the two different 4-H audiences - Junior, fourth, fifth and sixth grades and Junior High, seventh, eighth and ninth grades.

2. Since younger 4-H girls with fewer years in 4-H made higher improvement scores than those in the older age group, it is implied that

the Management Series may have been well suited to the needs of those in the younger group. This also might indicate that the units were not as challenging for the older girls, though those in all age groups improved significantly.

3. Since participants made a very significant improvement between their pretests and posttests and since it is assumed the nonparticipants would have made the same scores on the posttest that they did on the pretest, it is concluded that exposure to the Management Series resulted in significant learning taking place.

4. The greatest improvement score was made on Unit V - Let's Go Shopping for Food. This suggests that the game technique incorporated in that special unit may be an effective teaching device since Unit V was the only unit to incorporate such games. Unit V actually employed three different types of games. It should be noted, however, that overall Unit V improvement was not significantly higher than improvements on other units.

5. Fewer girls participated in Unit V, Let's Go Shopping for Food, because with three games included in the activity, it took more time to complete the entire unit.

6. Unit IV, Small Wonders in the Kitchen, received the highest "unit liked" score. This tends to indicate that the girls liked actual object identification as used in Unit IV. The method used to identify the objects and provide instant feedback was the light box which also may have influenced their "unit liked" rating.

7. Two units which recieved the lower "unit liked" score were those with an activity of only writing and completing blanks.

8. Unit V, Let's Go Shopping for Food, also received a lower "unit liked" score. It is believed that this is due to the complexity of the games and the length of time involved in completion.

Recommendations for Base of Study Findings

Based upon the findings of this study it is recommended that:

1. The present Management Learning Center series be used with 4-H members in other settings.
2. More time be given to planning the learning center activity session to actively involve the participants.
3. Consideration be given to expanding facilities in order for more 4-H members to participate in the camp learning center.

Recommendations for Further Study

1. Additional studies might be conducted to learn more about participants who become involved in the learning center and what motivates their involvement.
2. Research should be conducted to more closely study the different self-teaching techniques that might be adapted for use in the learning center.
3. Further study should be made to evaluate the actual learning that takes place as a result of participating in the learning center.

4. Additional studies should be made to determine the usefulness and versatility of the programmed instruction technique for use in the Tennessee 4-H Club Program.
5. Additional studies should be made of learning center series in other subject matter areas with the same and other 4-H audiences.



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APPENDICES

APPENDIX A

Materials included in each of the six Management Learning Center Units.

Unit 1 - Getting the Things You Want

Objective - To learn more about personal resources and how to use them wisely.

Thirty slides
Carousel Projector
Mirra-Screen
Cassette Tape
Cassette Tape Recorder
Ear Phones
Activity Instruction Booklet
Activity Sheet (included in Appendix B)

Unit 2 - How to Put Your Money in the Bank

Objective - To learn more about the services offered by a bank.

Twenty-one slides
Carousel Projector
Mirra-Screen
Cassette Tape
Cassette Tape Recorder
Ear Phones
Activity Instruction Booklet
Sample Signature Cards (included in Appendix B)
Sample Deposit Slips (included in Appendix B)

Unit 3 - This is the Way to Write a Check

Objective - To learn how to correctly write a check.

Seventeen slides
Carousel Projector
Mirra-Screen
Cassette Tape
Cassette Tape Recorder
Ear Phones
Activity Instruction Booklet
Sample Blank Checks (included in Appendix B)

Unit 4 - Small Wonders in the Kitchen

Objective - To learn to identify small kitchen accessories.

Thirty slides
Carousel Projector
Mirra-Screen
Cassette Tape
Cassette Tape Recorder
Ear Phones
Activity Instruction Booklet
Twelve small items displayed on peg board
Light Box

Unit 5 - Let's Go Shopping for Food

Objective - To learn how to make the wisest choice in food buying.

Thirty-six slides
Carousel Projector
Mirra-Screen
Cassette Tape
Cassette Tape Recorder
Ear Phones
Activity Instruction Booklet
"JeopFOODary" Game (included in Appendix B)
"Comparison of Cost" Game (included in Appendix B)
"What's in the Bag" Game (included in Appendix B)

Unit 6 - Pick a Snack Time Hit

Objective - To learn how to select snacks according to nutritive value and cost.

Twelve slides
Carousel Projector
Mirra-Screen
Cassette Tape
Cassette Tape Recorder
Ear Phones
Activity Instruction Booklet
"Pick a Snack Time Hit" Activity Booklet
Activity Sheet (included in Appendix B)

APPENDIX B

Activity Sheet for Unit 1 - Getting the Things You Want

1. Interests are things we like to do. Which of these is not an interest?

_____ skating
_____ sewing
_____ pencil
_____ reading

2. Talents are the things we can do best. Check the one that is not a talent:

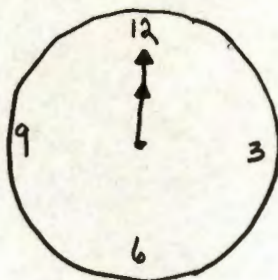
_____ drawing
_____ singing
_____ book
_____ making bread

3. Attitudes are the way we feel about things or people. How would you describe the attitude of these characters?

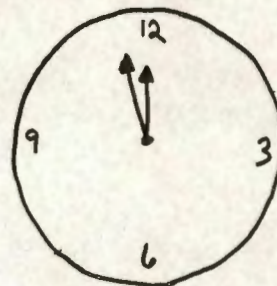


4. Time is another of our resources. How do you usually spend your 24 hours?

NOON

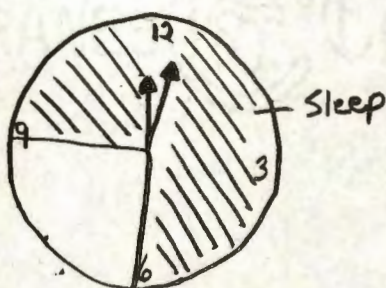


Midnight



Draw lines on the clock and indicate how the time is spent.

Example:



5. Our energy or go power is another resource. In order to have enough go power we must eat the right _____ and get enough _____ each night.
6. One of the following words does not belong in this statement. Put a check mark by the word:

When you have brain power you can

- _____ think
_____ read
_____ walk
_____ follow directions

7. Material goods are the things we can see and use. What are the material goods you would need to write a letter?



8. Connect the dots by following the numbers:



What is this resource? _____

9. Community resources are those things in our community where we live that we can use at little or no cost.

What are 2 of your community resources?

CHINESE CREST

Activity for Unit 2 - How to Put Your Money in the Bank

Sample Signature Card

INDIVIDUAL			
		Account Number	
SIGNATURE			
TO: URBAN NATIONAL BANK The above signed hereby agrees that the rules of the bank relating to special checking accounts shall govern this account.			
RESIDENCE ADDRESS		ZIP CODE	TELEPHONE
OCCUPATION		DATE OF BIRTH	
EMPLOYER		YEARS OF SERVICE	TELEPHONE
EMPLOYER'S ADDRESS			
CITY			

Sample Deposit Slip

Please Print Name and Address		DEPOSIT	
		Dollars	Cents
	CASH		
	Checks - List Separately		
	Less Cash Returned		
	TOTAL		

DATE _____ 19 _____

Checks and other items are received for deposit subject to the terms and conditions of this bank's collection agreement.

URBAN NATIONAL BANK

:0641 0156: 12 86 08 0'''

Activity for Unit 3 - This is the Way to Write a Check

Sample Check

_____		No. _____

		19 $\frac{2-0}{710}$
Pay to the		
Order of	_____	\$ _____
		DOLLARS
TO		
URBAN NATIONAL BANK		SPECIMEN—VOID
' : 0710 " " 0000 ' :		12 " " 34567 " " _____

CRANE & CREST

Activity Sheet for Unit 5 - Let's Go Shopping for Food

DIRECTIONS FOR "JeopFOODary" GAME

"JeopFOODary"

SHOPPING LIST	LABELS	COSTS	TIPS	STORAGE
50¢	50¢	50¢	50¢	50¢
\$1	\$1	\$1	\$1	\$1
\$5	\$5	\$5	\$5	\$5
\$10	\$10	\$10	\$10	\$10
\$20	\$20	\$20	\$20	\$20

Have you ever played a game where the answers were given and you gave the question? That is how you play "JeopFOODary." This game includes five categories of food shopping. Locate the cards on the pegboard. After you have decided on a certain space under a category, pull the set of cards off the pegboard and flip the white card (50¢, \$1, \$5, \$10, \$20) so that the green card (answer card) is exposed. Then, place the set of cards back on the pegboard.

Under each category are answers on green cards which range from 50¢ to \$20 in value. Write the questions to all the answers on your sheet — "Questions for JeopFOODary." After trying to give the right question to

an answer on a green card, look at the correct questions on the orange card. Score yourself after each answer by giving yourself the money from the "Money Drawer" for the value of the question or giving the money back to the "Money Drawer." If you got the right question, give yourself the amount of money the question is worth. If you gave the wrong question, give up the amount of money the question is worth. For example—for the right question you win \$5, but for the wrong you lose \$5.

Continue in any order until you have played all the spaces. Whenever a "Daily Double" appears the value of the question is doubled. For example—a \$20 question in "Daily Double" is worth \$40.

Have fun playing "JeopFOODary!" How much money did you win or did you go "in the hole?" Write the amount of money won or lost on your sheet—Questions for JeopFOODary." It really pays to know your steps for being a "Super Marketer."

Return your money to the "Money Drawer." Flip all of the cards to the original position of the \$ signs showing so that it will be ready for the next player.

NOTE: The directions given above are for one player. The game may be played 2-4 players. Each player would rotate turns selecting a particular space. Thus, each player would have a chance to give the question to only selected spaces instead of all of them.

Otherwise, the directions would be the same.

check your questions by the correct questions given on the orange cards which are underneath the green cards on the pegboard.

After you have finished writing the questions for all the spaces, complete:

\$ _____ Amount of money, I won at the end of the game

OR

\$ _____ Amount of money, I went "in the hole" at the end of
the game

CHECK ONE:

_____ I agree, it really does pay to know the steps to wise
food buying.

_____ I do not agree that it really does pay to know the
steps to wise food buying.

VI. DIRECTIONS FOR "Comparison of Costs" QUIZ

Look at the price tags on the food models for each of these groups and check the best buy in each of the groups:

GROUP A:

- _____ 1. Canned Biscuits (5¢ per serving)
- _____ 2. White Bread (3¢ per serving)
- _____ 3. Whole Wheat Bread (4¢ per serving)

GROUP B:

- _____ 1. Pears (33¢ per pound)
- _____ 2. Apples (29¢ per pound)
- _____ 3. Bananas (14¢ per pound)

GROUP C:

- _____ 1. Oranges (4¢ per serving)
- _____ 2. Orange Juice (5¢ per serving)
- _____ 3. Grapefruit (9¢ per serving)

Check your answers by turning the page upside down.

GROUP C - 1. (orange)

GROUP B - 3. (bananas)

GROUP A - 2. (white bread)

How many answers did you get correct? _____

How many answers did you get wrong? _____

VII. DIRECTIONS FOR "What's In the Bag?" Game

Using the three paper bags marked "A, B, and C," put the pieces of each puzzle together and try to guess what food item is in the bag.

(Remember, the ingredients on the label are listed with the most important ingredient first and the least important ingredient last.) Each puzzle gives the ingredients of a certain food.

Write your guess for the food item in each bag.

_____ BAG A (INGREDIENTS: Carbonated water,
sugar, caramel color, phosphoric
acid, natural flavorings, and
caffeine)

_____ BAG B (INGREDIENTS: Enriched flour,
sugar, shortening, eggs, salt,
leavening, and artificial flavors)

_____ BAG C (INGREDIENTS: Potatoes, Vegetable
oil, salt with preservatives, BHA,
BHT, Citric acid, and propyl
gallate)

Check your answers by turning the page upside down.

Bag C - potato chips

Bag B - sugar cookies

Bag A - coke

How many answers did you get correct? _____

How many answers did you get wrong? _____

Activity Sheet for Unit 6 - Pick a Snack Time Hit

Student Activity Sheet

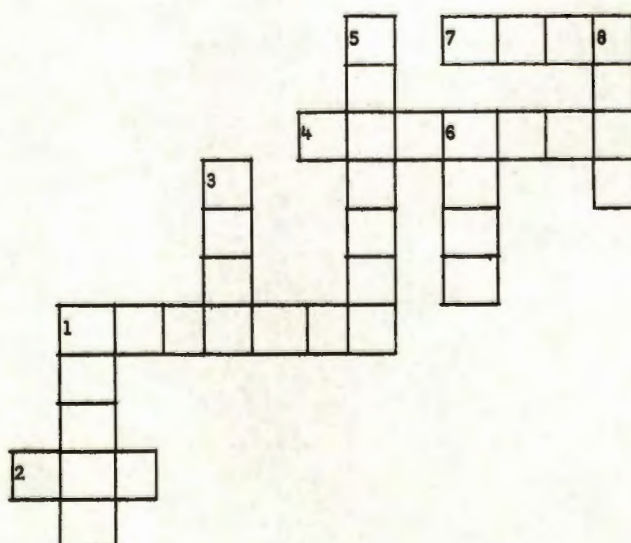
- I. Complete the following crossword puzzle from information given with the slides.

Across

1. Candy and _____ will solve hunger pangs but offer little nutrition.
2. Empty calories do little for us except make us _____.
4. Found in milk and is needed for healthy bones and teeth.
7. One of two important words in deciding if a snack is good for you.

Down

1. _____ is a form of milk.
3. You need three servings daily from this group.
5. Are a good source of Vitamin C.
6. We have compared snacks considering nutrition and _____.
8. The other important word in deciding if a snack is good for you.

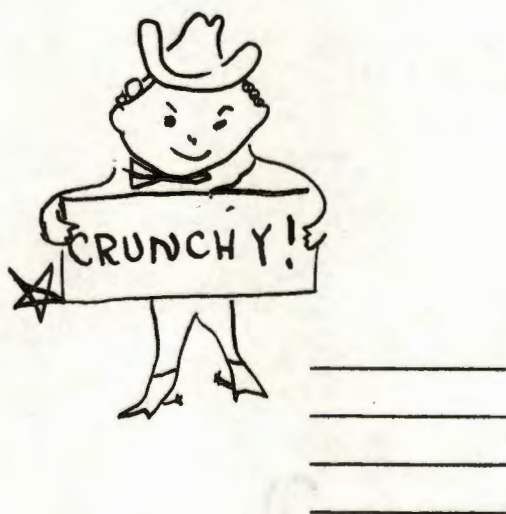


Words to use in puzzle
 calcium
 cookies
 cost
 cream
 fat
 milk
 oranges
 time
 what

II. Open activity booklet entitled "Pick a Snack Time Hit" to page 1.

Look at the pictures and then write the correct foods under the headings listed below.

Which snack would you eat if you wanted something?



III. Turn to page 2 of your activity booklet. Select the five most nutritious snacks on this page. Write your selections below.

APPENDIX C

- Name _____ County where you live _____
_____ Campbell
_____ Jefferson
_____ Johnson
_____ Loudon
_____ Roane
_____ Sevier
1. Age _____ Years
2. Grade you just completed in school _____ Grade
3. Where do you live: (Check one)
_____ a. in town
_____ b. in a subdivision or in the country
_____ c. on a farm
4. Do you live (Check one)
_____ a. with both mother and father
_____ b. with one parent (separated)
_____ c. with one parent (one not living)
_____ d. with grandparents or other relative
5. If your father lives at home, what is his occupation? (Check one)
_____ a. works in factory, store, plant or mill
_____ b. Professional (Teacher, Doctor, Lawyer, Engineer, etc.)
_____ c. has own business
_____ d. Farmer
_____ e. Retired
_____ f. Other (Please specify) _____
6. Does your mother work? a. _____ Yes b. _____ No
- If yes, what type of work: (Check one)
_____ a. factory worker
_____ b. store clerk
_____ c. secretary
_____ d. teacher
_____ e. other (please specify) _____
7. Number of years you have been a 4-H Member _____ Years
8. Did you take the Management Project this year? (Check one)
_____ a. Yes
_____ b. No
- If yes, did you turn in the record sheet? (Check one)
_____ a. Yes
_____ b. No



9. Which 4-H projects did you take this year? _____
10. Do you have any of the equipment listed below in your home? (Please check)
- ☐ a. Tape Recorder
 - ☐ b. Tape Player
 - ☐ c. Record Player
 - ☐ d. Slide Projector
 - ☐ e. Movie Camera
 - ☐ f. Movie Projector
11. Have you ever used or operated any of the equipment listed below? (If so, please check)
- ☐ a. Tape Recorder
 - ☐ b. Tape Player
 - ☐ c. Record Player
 - ☐ d. Slide Projector
 - ☐ e. Movie Camera
 - ☐ f. Movie Projector

Getting The Things You Want

MULTIPLE CHOICE: Check the correct or best answer

1. Management is
 - ☐ a. doing a good job.
 - ☐ b. using things you have to get things you want.
 - ☐ c. saving all your money.
2. Goals are
 - ☐ a. things you want.
 - ☐ b. things that you have.
 - ☐ c. things you can buy.
3. Attitudes are
 - ☐ a. the way you talk.
 - ☐ b. caused by not being able to make decisions.
 - ☐ c. the way you feel about things or people.
4. The important things to remember about money as one of your resources, is
 - ☐ a. if you have a lot all your problems are solved
 - ☐ b. to know how much money you have and then be able to spend your money to get the things you want.
 - ☐ c. if you have a limited amount of money, you might as well forget about everything you wanted.
5. Material goods, things that you can see and use, are another of your resources. Which one of the goods listed would you not need if you were painting your bike?
 - ☐ a. rags
 - ☐ b. flash light
 - ☐ c. paint brush

TRUE-FALSE: Circle the correct or best answer

- | | | | |
|---|---|-----|---|
| T | F | 6. | The things you have are called resources. |
| T | F | 7. | Everyone has the same amount of resources. |
| T | F | 8. | Your resources can help you reach your goals. |
| T | F | 9. | It is necessary to have a lot of material goods in order to get any job done. |
| T | F | 10. | Community resources are those things in your community that you can use at little or no cost. |
| T | F | 11. | Brain power is your ability to think, read and follow directions. |
| T | F | 12. | Management is something that only concerns adults. |

Getting The Things You Want (Page 2)

FILL-IN BLANKS

Choose from the resources listed to fill in the blanks below (Resources are underlined at bottom of page)

13. Your _____ are the things you like to do.
14. _____ are the things which you can do best.
15. _____ is a resource which everyone has the same amount of but no two people use their's alike,

Attitudes, Time, Brain Power, Interests, Money, Community Resources,
Talents, Material Goods, Go Power.



How To Put Your Money In The Bank.

MATCHING: Place the letter that matches to the left of the number

- | | |
|--|--|
| _____ 1. A safe place to keep your money. | |
| _____ 2. What a person fills out to show how much money he wants to put in his bank account. | A. Deposit Slip |
| _____ 3. What you sign when you open an account with a bank. | B. Bank |
| _____ 4. What you call it when you write your name on the back of the check. | C. Federal Deposit Insurance Corporation |
| _____ 5. FDIC | D. Signature Card |
| | E. Safe Deposit Box |
| | F. Check |
| | G. Endorse |

TRUE-FALSE: Circle the correct or best answer

- | | | |
|---|---|---|
| T | F | 6. The use of checks eliminates the need for carrying a large amount of money with you. |
| T | F | 7. Cancelled checks are not a legal receipt. |
| T | F | 8. By paying with a check, you have a record of where the money was spent. |
| T | F | 9. A checking account helps to establish a good credit rating. |
| T | F | 10. Banks are only useful to people with a very large income. |
| T | F | 11. A check can only change hands, or be good, after it has been endorsed. |
| T | F | 12. There is no particular rule to follow in where or how you endorse a check. |
| T | F | 13. A check signed with the name of the payee only should be endorsed at the time and place the check is to be cashed or deposited. |
| T | F | 14. A 'Restrictive Endorsement' is a check signed with the instructions: "For deposit only" with the payee's signature beneath. |
| T | F | 15. A check signed with the name of the payee only is called endorsement in blank. |

This Is The Way To Write A Check

(Check the correct or best answer)

1. Checks are used
 - ☐ a. by people who don't have any money.
 - ☐ b. as a form of ready money in place of cash.
 - ☐ c. to pay large bills only.
2. The amount of the check written in numbers should be placed
 - ☐ a. close to the dollar sign.
 - ☐ b. far from the dollar sign.
 - ☐ c. anywhere on the line as long as it can be read.
3. You should sign your name on the check
 - ☐ a. with your last name first.
 - ☐ b. as you signed your signature card.
 - ☐ c. different each time you write a check.
4. If you make a mistake while writing a check you should
 - ☐ a. mark over the mistake.
 - ☐ b. leave it like it is, since it probably won't be noticed.
 - ☐ c. tear up the check and write another.

TRUE-FALSE: (Circle the correct or best answer)

- | | | | |
|---|---|----|---|
| T | F | 5. | To save time, abbreviate the name of the person, business firm or organization you are writing the check to. |
| T | F | 6. | A check may be described as a letter of instruction from the check writer to the bank where he has his money. |
| T | F | 7. | If the amount written in numbers and in words is not the same, the bank will pay the amount written in words. |
| T | F | 8. | The check register, or sometimes called a stub, is just an extra that is of no use to you. |
| T | F | 9. | You should keep a few blank checks, which you have signed, in your pocketbook to use when in a hurry. |

10. Explain the reason for your answer to number nine.

Small Wonders In The Kitchen

MULTIPLE CHOICE: Check the correct or best answer

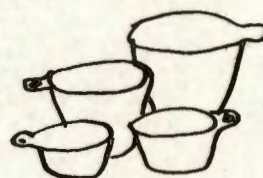
1. A kitchen accessory is
 - ☐ a. an addition to your kitchen color scheme.
 - ☐ b. something to hang on the wall.
 - ☐ c. an object for doing something.
2. Small kitchen accessories help you. . .
 - ☐ a. save money.
 - ☐ b. do a job easier and faster.
 - ☐ c. to cut out dishwashing.
3. Most efficient and well-designed accessories are. . .
 - ☐ a. simple to operate.
 - ☐ b. too expensive to buy.
 - ☐ c. take too much storage space.
4. Select accessories according to. . .
 - ☐ a. the color of the item.
 - ☐ b. the one with an instruction book.
 - ☐ c. kitchen jobs you most frequently do.
5. Which one of these is not considered when selecting small accessories for the range (stove) area.
 - ☐ a. Heat resistant.
 - ☐ b. Easy to clean.
 - ☐ c. Brand name of the range.
6. Kitchen accessories should be stored
 - ☐ a. in the cabinet out of sight.
 - ☐ b. on the bottom shelf.
 - ☐ c. in areas where they will most often be used.
7. A set of wooden spoons are a handy kitchen accessory. Which is not true about wooden spoons
 - ☐ a. the handle will transfer heat to your hand.
 - ☐ b. easy on hands and to handle.
 - ☐ c. won't scratch pan.
8. Which kitchen accessory will cut shortening in flour the fastest?
 - ☐ a. two knives.
 - ☐ b. pastry blender.
 - ☐ c. knife and fork.
9. Good for cutting dough, cookies, pizza, meat, vegetables, packages and others
 - ☐ a. a paring knife
 - ☐ b. scissors.
 - ☐ c. metal spatula

IDENTIFY: Write the name of the kitchen accessory on the line or tell what it is used for

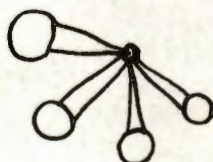
10.



11.



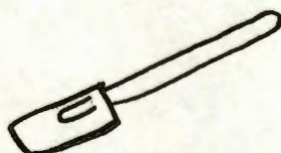
12.



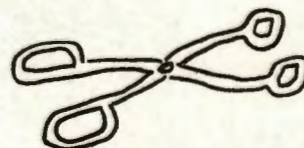
13.



14.



15



CRANESEAL CREST

Let's Go Shopping For Food

MULTIPLE CHOICE: Check the correct or best answer

1. To prepare a shopping list, you should do all of the following except which one?
 - ☐ a. Check the food you have on hand.
 - ☐ b. Determine menus based on the "Basic Four" Food Guide and list foods needed.
 - ☐ c. Write more expensive foods on your list than you can afford to buy.
2. A shopping list will help you to
 - ☐ a. Avoid impulse buying.
 - ☐ b. Know the most expensive item on the shelf.
 - ☐ c. Know how long food will keep without spoiling.
3. Which is the correct reason for buying fruits or vegetables "in season?"
 - ☐ a. They will be at their peak of quality and often at lower prices.
 - ☐ b. They will be more expensive.
 - ☐ c. They will have less quality during this period.
4. Which one of the following items is required by law to appear on the label of a can?
 - ☐ a. Picture of product.
 - ☐ b. Recipes.
 - ☐ c. Net quantity of contents.
5. Which one of the following is not a good tip for saving money when shopping for food?
 - ☐ a. Avoid impulse buying.
 - ☐ b. Consider "specials".
 - ☐ c. Always buy the most expensive brand since you get higher quality this way.
6. Which is the best buy in a canned food of the same quality?
 - ☐ a. Brand A which weighs 24 ounces and costs 45¢.
 - ☐ b. Brand B which weighs 24 ounces and cost 34¢.
 - ☐ c. Two cans of Brand C which together weigh 24 ounces and cost 39¢.

Let's Go Shopping For Food (Page 2)

7. Which are "perishable" foods?

- ☐ a. Foods which will spoil if they are not refrigerated or used within a short period of time.
- ☐ b. Foods which will stay fresh for a long time in your cabinet.
- ☐ c. Food items which are canned such as canned green beans.

8. Which one of the following food items is not included in the "Basic Four" Food Guide?

- ☐ a. Milk
- ☐ b. Corn
- ☐ c. Candy Bar

MATCHING: Place the letter that matches to the left of the number

- | | |
|---|---|
| ☐ 1. Shopping List | a. Includes fruits and vegetables, meats, milk products, and bread and cereal products. |
| ☐ 2. Label | |
| ☐ 3. Impulse Buying | b. Buying food which you had not planned to buy or buying on the "spur" of the moment. |
| ☐ 4. Convenience Foods | |
| ☐ 5. "Basic Four" Food Guide | c. Written plan of groceries to be bought. |
| ☐ 6. Cost Comparison | d. Foods which are completely or partially prepared to save time in cooking. |
| ☐ 7. "Perishable Foods" | e. Indicates what is inside a package or can. |
| | f. Foods which will spoil if they are not refrigerated or used within a short period of time. |
| | g. To examine two or more brands of the same food item to determine the best buy. |

Pick A Snack Time Hit

MULTIPLE CHOICE: Check the correct or best answer

1. Which snack would be the better choice for the nutrients it contains?
 - ☐ a. Apple Pie
 - ☐ b. Milk Shake
2. Which do you think would be the cheaper of the two snacks?
 - ☐ a. Slice of Chocolate Cake
 - ☐ b. An Apple
3. Which is important in selecting snacks?
 - ☐ a. Select snacks that are cheap in cost.
 - ☐ b. Choose from the basic four food groups.
 - ☐ c. Eat just before mealtime.
4. Carefully chosen snacks provide
 - ☐ a. Calories
 - ☐ b. Fat
 - ☐ c. Protein, Minerals and Vitamins
5. Calcium for healthy bones and teeth is found most in which food group?
 - ☐ a. Milk
 - ☐ b. Vegetable
 - ☐ c. Meat
6. Another form of milk beside fresh whole milk
 - ☐ a. Eggs
 - ☐ b. Margarine
 - ☐ c. Cheese

TRUE-FALSE: Circle the correct or best answer

- | | | | |
|---|---|-----|--|
| T | F | 7. | Pecan Pie and Poptarts are examples of a nutritious snack. |
| T | F | 8. | Milk and soft drinks contain about the same nutrients. |
| T | F | 9. | A good rule to follow in selecting snacks is to always select the one which cost the least. |
| T | F | 10. | Potato chips would be a better snack choice than a peanut butter sandwich because it is more convenient. |
| T | F | 11. | You will be making a wiser choice to select the most nutritious snack even though it may cost more. |

Pick A Snack Time Hit. (Page 2)

FILL-IN BLANKS: Choose from these words to fill in the blanks below.

Calories Expensive Nutrition 4432 Time Carefully What

Important in deciding if snacks are good for you are the

12. _____ the snack is eaten and 13. _____ you choose.

Hurried snacks such as candy and cookies can cause problems. They bring quick relief from hunger pangs, but don't contribute much nutrition.

14. _____. Oftentimes these empty calorie snacks are

15. _____ for the nutrients they supply.

CRANES & CREST

APPENDIX D

UNIT _____

YOUR NAME _____

About the unit you just completed, please answer how much you liked or disliked the different parts of it. (Please make one check for each number.)

	Liked Very Much	Liked Some	Neither Liked Nor Disliked	Disliked	Disliked Very Much
1. The subject of this unit					
2. The activity part					
3. Operating the equipment					
4. The pictures used in the slides					
5. The voice on the tape (clear and understandable)					

VITA

Mary Ross King (Mrs. Glenn W.), born in Clarksville, Tennessee, November 1, 1941, graduated from the University of Tennessee, College of Home Economics, August, 1963. She began graduate work in 1971 and earned a Master of Science Degree in Agriculture majoring in Agricultural Extension Education June, 1974.

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She is a member of the National Association of Extension Home Economists, American Home Economics Association and Gamma Sigma Delta, Honor Society of Agriculture.

She is married to Dr. Glenn W. King, an Optometrist, and they reside in Rockwood, Tennessee.