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4-H 270 Baking is Fun! : Leaders Guide

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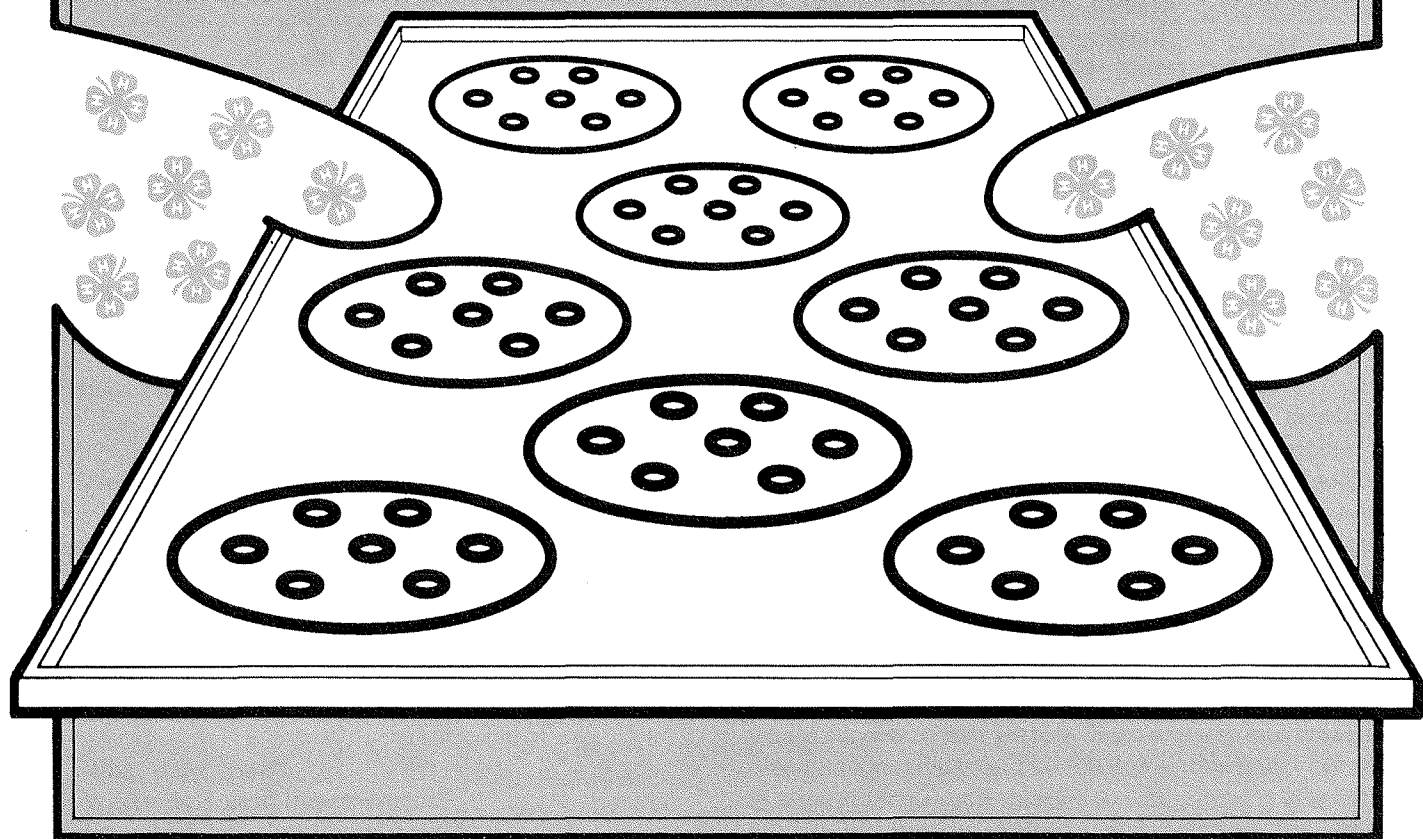


Nebraska Cooperative Extension

4-H 270

Baking Is Fun!

Leader's Guide



Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Leo E. Lucas, Director of Cooperative Extension, University of Nebraska, Institute of Agriculture and Natural Resources.



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Baking Is Fun

Introduction

Congratulations on becoming a 4-H baking project leader. Teaching young people the skills of baking is a satisfying activity. Like most 4-H leaders, you will probably learn as much as, or more than, the young people in your group.

This 4-H baking project allows members to:

- make decisions;
- be creative;
- gain knowledge and skills; and
- work and share information with others.

This project is designed to be used after young girls and boys have completed the project, *The Road to Good Cooking*. After completing *Baking Is Fun* the 4-H member may want to explore more advanced baking levels in *Baking Level II* and *Level III*. At the same time 4-H members may want to explore the meal management projects.

The focus for *Baking Is Fun* is on:

- refining measurement techniques;
- using appropriate kinds of baking equipment;
- reading and following directions;
- following safety rules;
- experimenting with baking ingredients and methods; and
- determining the qualities of cookies, biscuits, muffins or quick bread.

Your role as project leader is to encourage and guide the 4-H members. Teach members to evaluate their work and decide how to improve their baked products. (Some standards for baked products may change as we shift to baking more low-fat, reduced sugar and increased fiber products.) Help members to grow in their baking skills by having them ask themselves the following questions:

What did I learn?
Where do I need improvement?
How do I feel about what I did?
What shall I plan to do or learn next?

Characteristics of Pre-teens

Members involved in this project are usually 9 - 11 years and are considered pre-adolescents or pre-teens.

Remember that each child is unique and develops at his or her own pace. The following general characteristics will not be observed in all children at the same age or at the same stage of development.

Pre-teen characteristics:

- Interested in making things
- Large muscle control is fairly well developed
- Fine finger control is beginning to develop
- Peer group is of increasing importance
- Independence from adults is important
- Limited decision-making abilities
- Abounding energy
- Difficulty with sitting still for long periods of time
- Need to experience early success
- Need to feel loved and accepted
- Attention span is good for short periods of time
- Active participation increases attention span
- Searching for self-identity and need assistance in building a strong sense of positive personal confidence
- Need help in managing time

For further information read in the *4-H Leader Handbook, 4-H 69 Understanding Youth*.

Special Members

Some 4-H members will be experiencing developmental patterns that vary from the "normal member". The gifted, mentally or physically handicapped or socio-economically deprived can find personal success and growth through 4-H activities. Extra help from the leader, parents, guardians, and resource people in the community can guide the members through 4-H experiences. Leaders should talk with the special member's teachers and parents about the member's ability. Even the smallest completed step in a project or activity means success to that person. Take one step and break it down into small parts. The flexible learning that occurs in nontraditional settings such as 4-H groups is often the key to healthy development and learning for these special individuals.

Responsibility of the 4-H Leader

1. Attend leader training meetings when possible to receive information on this project.
2. Provide space and equipment for work meetings. This will encourage 4-H'ers to participate.
3. Explain what the program offers. Encourage 4-H'ers to pursue areas of individual interest and share their findings with others.
4. Help individuals evaluate their projects.
5. Encourage participants in presentations and exhibits to help them gain poise and confidence.
6. Learn and grow with the members. Broaden your background in baking.
7. Ask your Extension Agent-Home Economics for help in providing bulletins, materials and other resources listed in this guide.
8. Involve parents in the 4-H club. Begin by encouraging 4-H'ers to discuss their project plans with their parents. Parents can take part in 4-H and relieve you of some of the responsibilities. For example, they can help with transportation; work out details for a tour or field trip; have meetings in their homes; or serve as resource persons for games, activities, or lesson presentations.

Teaching Tips For Leaders

As a 4-H club leader you are concerned with teaching youth. The way you teach is just as important as what you teach. The following tips will guide you in helping 4-H'ers achieve success and feel good about themselves.

1. **Cooperation** — Be certain the child wants to learn to bake.
2. **Participation** — Let the 4-H'er make some choices.
3. **Explanation** — Define terms because 4-H'ers need to know what they mean. Don't assume they know.
4. **Division** — Separate the learning process into small distinct tasks.
5. **Flexibility** — Remember there is no such thing as "the 4-H Way". You may be shown one or several better ways.
6. **Pace** — Learning takes time and practice requires even more time. Be patient! Watch for "STOP" signs such as boredom, disinterest, fidgeting.
7. **Share** — Share ideas and feelings with each other: Leaders with 4-H'ers, 4-H'ers with 4-H'ers, parents with 4-H'ers.
8. **Criticism** — Some positive suggestions are constructive; repeated negative comments are destructive. Criticism tends to come easier than praise.
9. **Praise** — Give it out frequently and generously. There is always something worthy of a compliment in everyone's work.

Teaching Techniques

Using various teaching techniques can help stimulate and maintain interest in the project. Members learn most when they receive information through as many of their five senses as possible. Some of these techniques are:

Demonstrations — To demonstrate is to show by doing. Encourage members to give demonstrations to help them develop poise and self-confidence. Give each member an opportunity to speak in front of the group.

Field Trips — Visit a bakery. Before you go, plan the particular things you want to see and do. Let the bakery personnel know the purpose of your trip.

Games — Games can be an enjoyable way to learn. Adapt the games to your group according to age, size of group, available space, and the particular learning you wish to reinforce.

Exhibits and Displays — Exhibits and displays are optional and may be a part of project meetings, fairs, or other community display or "showcase" opportunities. Generally, young people like to show others what they have learned. Exhibits and displays may also offer opportunities for both formal and informal evaluation.

Lesson 1 Review

This lesson reviews information from *The Road to Good Cooking*. It may be helpful to review the project manual for *The Road to Good Cooking* if you are not familiar with it.

Activities - Scavenger Hunt (for equipment)
Matching Quiz (for measurement techniques)
Math Skills Quiz (for recipe adjustment)
Baking Experiment (for examining appropriate equipment)

Scavenger Hunt

Be familiar with the equipment you ask members to find. As members find it, ask them to describe the proper use or uses for it.

Alternate Activity — You may ask members to help in a demonstration of the baking equipment. In order to make this successful, work with a couple members before you meet to help them feel more comfortable in giving a demonstration.

Matching Quiz

Refer to *The Road to Good Cooking*, pp. 8-9, for a review of the proper measuring techniques. Some members may have trouble determining the difference between "flour, sifted" and "sifted flour." Be ready for a good explanation or use a member to help you demonstrate the difference.

Answer Key for Matching Quiz:

1. d
2. g
3. a
4. e
5. c
6. i
7. f
8. h
9. b

Other useful information:

The hint for using 3 tablespoons of cocoa in place of 1 ounce of chocolate will mean the fat in the original recipe will be reduced. Traditionally, when such a substitution is made, one tablespoon of fat is added in order to account for the difference in fat content. For a reduced fat recipe, try substituting the cocoa without adding the fat.

Math Skills Quiz

Answer Key: A quart has 32 fluid ounces.

A recipe calls for 1/2 tablespoon.

How many teaspoons is that?

1 1/2 teaspoons

1/2 cup has 4 fluid ounces

1/2 gallon is 2 quarts or 8 cups.

Baking Experiment

The baking pans used in this experiment should not be aluminum foil pans. They are too thin and hinder proper cookie baking. You may want to point out that the best type of baking pan may vary with the baking product. For example, with cookies, a shiny pan is usually more desirable because it reflects heat. It also is slow-baking and allows the cookies to be fully baked before becoming too brown on the bottom. The dark or dull pans absorb the heat and are fast-baking pans. Cakes made in fast-baking pans usually have larger volume and better crumb quality, but their tops are more rounded and their sides may be browner than cakes made in slow-baking pans.

Be sure members complete the thought questions at the end of the experiment. Let them make their own decisions, then discuss their answers with them. Remember, there may be differences in opinion among the members. Be a guide for your 4-H members.

Lesson 2 Do I Like Baked Products?

At first glance, this lesson appears to have little to do with baking. The activities in this lesson allow the 4-H members to explore their baking environment in a no-bake way.

Before the lesson, you may ask members to look up some historical facts about baking, breads, or grain products. The section entitled, "Did You Know?" provides a glimpse of some of the interesting tidbits that can be gathered. As a leader, be ready with maps, cookbooks from other countries or history books. The public library is a good resource for you.

Your members may have questions about the Fertile Crescent such as: Where is it? Why does it have that name? You should be ready to explain that the Fertile Crescent is usually defined as an area beginning in a small portion of Northern Egypt and extending north through Palestine, Syria and Mesopotamia, then east across the oasis and mountain slopes to the Indus River and the Punjab of India. It is a fertile growing area because of the presence of water from rivers. A globe or world map will be helpful for your explanation.

Activities: Baking History Reporter
Art Time Project

Baking History Reporter

If you want to go further with this project, use the members' stories in a "special feature newspaper". Let members develop a name for their newspaper and news headlines for the stories. Be sure to use by-lines so each reporter is identified. With the help of a copy machine, the "newspaper" can be copied for members to take home and share with their families.

Art Time Project

This activity may be done as a group or individual activity at your meeting or at home. Be sure that sufficient numbers of magazines, old books, or posters are available for pictures. Encourage members to select only those pictures of baked goods that reflect their personal food likes.

Let members display their artwork. Give each member an opportunity to share the ideas reflected in the picture. Be ready with some key questions: Why did you select that food? Does the food remind you of a special time, place, person or event? What is the best quality about the food you selected? Have you ever prepared the food you selected?

Lesson 3

A Closer Look at Your Ingredients

This lesson helps members discover that baking ingredients have a specific function or functions. To start the lesson, it may be helpful to gather many kinds of baking ingredients. Review each ingredient with the members. Ask them if they know what the ingredient does in a recipe. Be ready to define terms such as "leavening agent."

Activity: Leavening Experiment

Leavening Experiment

Gather all the ingredients and equipment ahead of time. If time and space allow, have 4-H members work alone or in pairs. Alert the members that they will need to watch the experiments carefully so they can record the results. As a leader it will be helpful to do the experiment ahead of time for yourself.

In the experiment, water plus baking powder should provide an immediate reaction. You should see gas bubbles formed and released as soon as water is added. Baking soda and water, however, do not provide an immediate reaction. When the lemon juice is used, the acid medium allows a reaction. Therefore, recipes that use baking soda alone may not need much leavening action, as in the case of some cookies. If more leavening action is desired, the recipe will use both baking powder and baking soda or it will supply a source of mild acid (sour milk, sour cream, buttermilk, cream of tartar and other ingredients) along with the baking soda.

The purpose for this experiment is to let young bakers discover what could happen if an improper ingredient is used. It is common for novice bakers to confuse baking powder and baking soda. It will be important to help your members learn that some substitutions in recipes are undesirable.

Lesson 4

The World of Cookies

To start this lesson, you may want to find pictures of cookies from other countries. Invite members to tell about their favorite cookies. An important message is that cookies are concentrated sources of energy so members should look for recipes that might be low in fat and sugar and full of ingredients such as oatmeal, raisins, fresh fruit or other nutrient-rich foods.

The steps for cookie making can be demonstrated by members or leaders. If desired, a large poster showing the steps for mixing cookie dough could be displayed for members.

Activities: Consumer's Choice (comparison activity)
Math problem

Consumer's Choice

You will need to gather costs of ingredients ahead of time for the cost comparison. If members bring some ingredients or items for the cookie comparisons, ask them to also provide the price of those items they bring.

For the roll & slice mix and bagged cookies, you will need to know how many cookies each product provides. Divide the unit price by the total number of cookies to learn the price per cookie.

In order to calculate the cost of homemade cookies, the following information will be helpful:

1 lb. margarine = 2 cups

1 lb. shortening = 2 1/4 cups

5 lb. bag sugar = 10 cups (1 lb. = 2 cups)

5 lb. bag flour = 20 cups (1 lb. = 4 cups)

The price of cream of tartar, baking soda, salt, and cinnamon can be calculated at 5 cents for the entire homemade cookie recipe.

To prepare the cookies, divide the members into small working groups of two to three people. Try to see that each member has a job. Remind them to record the time it takes to prepare the cookies.

While cookies are baking, group members will need to share the information they have already collected about preparation time and cookie price. Lead members in a discussion of qualities of cookies so they will be ready for the quality comparison after all cookies are done and tasted (see What's A Good Cookie). Key questions: What do you like best about cookies? How should a cookie taste? What kind of feeling in your mouth do you like when you first bite into a cookie? Keep in mind that answers will vary according to personal tastes.

When it is time to rate the cookies, ask members to work on their own as much as possible. Then lead a discussion after all are finished.

Math problem

Answer key: A sugar cookie recipe used 1 cup of fat to make 48 cookies. One cup of fat equals 16 tablespoons of fat or 48 teaspoons of fat. How many teaspoons of fat does each cookie have? (1 teaspoon)

Measure and show members what one teaspoon of fat looks like!

Other useful information:

Sometimes people use lard in place of shortening in cookie recipes. Lard is mostly a saturated animal fat whereas shortening is mostly a hardened (saturated) vegetable fat. Using lard in a cookie recipe may lead to undesirable texture and flavor changes.

It is usually necessary to lift cookies from the baking pan to a cooling rack with a spatula while they are still warm so they will not break during the transfer.

Lesson 5

Welcome to Biscuit Baking

Be ready with a demonstration or poster to show the biscuit method of mixing. If possible, allow members a chance to practice kneading biscuit dough before they do the biscuit experiment.

Activity: Let's Experiment — Biscuits

Let's Experiment — Biscuits

This experiment introduces members to the idea that some recipes can be changed to meet a dietary need. In this case, the fat is changed from saturated to polyunsaturated by switching from shortening to vegetable oil. This change is often asked of people who are at risk for heart disease or people who are interested in lowering their risk of heart disease.

Before rating the biscuits, introduce members to the guidelines that are often used by judges when they evaluate baked products. Highlight the following points:

- Standards are usually used (see What's A Good Biscuit)
- Judging is done quietly; there is no talking or comparison between judges as decisions are being made
- Use all of the senses in food judging — touch, see, smell, hear and taste

Be sure to discuss members' responses. Allow room for individual opinions.

Lesson 6

Time for Drop Batters

The last lesson in this project provides experiences with drop batters and the muffin method of mixing. Be sure to point out the differences between the biscuit and muffin methods of mixing.

Members are introduced to a variety of muffins so they can learn that adding ingredients such as oatmeal, fruit, cheese, and raisins will help pack more nutrients into the muffins. They become a more nutrient-dense product.

Activities: Muffin Making
Be a Food Editor

Muffin Making

Divide the members into small baking groups and prepare the muffins suggested. If desired, provide some of your own unusual muffin recipes for members to try.

Be a Food Editor

This activity encourages the creative writing skills of your 4-H members. Let members work individually or have two or three members work together on one "muffin review." Share the reviews after they are finished. Encourage dramatic presentations to create more interest.

Let's Wrap It Up

Tasting Party

This is a chance for the 4-H members to have fun and share their learning experiences with each other. If desired, you may let members invite a friend.

Be sure to review tasting rules:

Use all the senses.

No talking while tasting.

Clear the palate between tastes using water, a celery or carrot stick, or soft tortilla shells.

Other useful information:

Encourage members to start a recipe collection.

Ask members to complete the record sheet in the back of the project manual or use locally developed record sheets if desired.

Members should make at least **four** baked items for the completion of this project.

Encourage members in demonstrations.

Encourage members to enter baked products for judging.