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4-H 302 More Baking is fun: Leader's Guide

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Leaders' Guide

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MORE BAKING FUN
Level II

INTRODUCTION

Congratulations for your willingness to experience MORE BAKING FUN with your 4-H group. Like most 4-H leaders, you will probably learn much as, or more than, the young people in your project group.

MORE BAKING FUN, Level II is designed to be used after 4-H members have completed the first baking project, Baking Is Fun. The 4-H members may want to explore the additional meal management projects as they work on this one.

Your role as project leader is to encourage and guide 4-H members. Teach members to evaluate their own work and make decisions that will improve their baked products. Standards for baked products are changing as we shift toward lowfat, reduced sugar and increased fiber products. You can help members grow in their baking skills by having them ask themselves the following questions:

What did I learn?
Where can I improve?
How do I feel about what I did?
What should I do or learn next?

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 getting bulletins, materials and other resources listed in this guide.
8. Involve parents in the 4-H club. Parents can help with transportation; arrange field trips and tours; have meetings in their homes; and serve as resources person for games, activities or lesson presentations.

Teaching Techniques

As with other baking and meal planning projects, use various teaching techniques to help stimulate interest. Demonstrations, field trips, games, exhibits and displays are encouraged. The lessons include some ideas and you may have many more. Don’t be afraid to try them.

Activities which encourage 4-H'ers to interact with younger or older age groups also can be valuable learning experiences. For example, a tea which features some new baked items can be given for grandparents and other senior citizens. Or, your 4-H group may invite preschool children to a meeting to share some baking skills together. Your ideas for this project are unlimited. Good luck and happy baking!

LESSON 1. Dietary Guidelines

The first lesson in More Baking Fun - Level II focuses on the nutritional value of breads and cereal products. The Dietary Guidelines for Americans are introduced to members. Leaders may want to get brochures and visuals that explain the Dietary Guidelines from their local Extension offices. Since alcohol is not encouraged for youth audiences the seventh guideline, IF YOU DRINK ALCOHOLIC BEVERAGES, DO SO IN MODERATION, has been omitted from the discussion.

Activities: How Important are Breads and Cereal Products in Your Life?

Bread Nutrisearch

How Important are Breads and Cereal Products in Your Life?

This activity asks members to think about how many bread and cereal products they eat. Lead a group discussion with members. Questions to ask:

What type of bread products does the group eat? How does the group rate their intake of bread and cereal products?

As an additional activity, members may record and code what they’ve eaten in one day for dietary assessment using the microcomputer program, FOODAY, which is available in most Nebraska Extension offices. Sections 1, 2 and 3 of the FOODAY program will be especially helpful for this exercise. A FOODAY group summary can provide dietary intake information about the group as a whole.

Bread Nutrisearch

(See game solution on the following page.)

LESSON 2. Learning about Grains

Members are able to work with different types of grain flours in this lesson. An experiment with gluten balls helps members understand why gluten development affects yeast bread structure. It would be helpful if leaders could have various types of grain or grain flours available for members to see. When appropriate and available, a visit to a grain mill would make a good field trip.

Activities: Let’s Experiment - Gluten Balls

Consumer Activity - Labels
Let's Test Your Flour IQ
Let's Experiment - Gluten Balls

This activity calls for a variety of flours. The experiment will have more meaning if many of the suggested flours can be used. It might be helpful to ask several members to bring a different type of flour for the experiment.

Be sure to encourage all members to knead for the same amount of time so that a good comparison can be made. Ask members to compare the look and feel of the gluten balls made with different flours.

Working the starch out of the balls is a tricky process that is helped by the cheesecloth bags. Be sure that the rinse water is clear as a signal that all starch has been removed before proceeding with the experiment.

The rye, whole wheat and cake flours will have less gluten or less gluten development. The gluten ball that remains after rinsing will be small. After baking, the balls should be a light and paper thin. Gluten balls from bread and all-purpose flours should have the most structure development and be larger than the others.

Questions for discussion: How do the gluten balls feel and look differently? Why? Which flours would work best in bread making? Why? What happens to the gluten as dough is kneaded?

Consumer Activity - Labels

This is a good field trip activity. You may need to schedule it on a different day than the experiment with gluten balls. Or, you may assign different members to bring the following nutrition and ingredient labels to the meeting: white, 100% whole wheat, wheat and rye breads, croissant rolls and English muffins. You could then complete the activity at the meeting while gluten balls are baking.

Review the questions with members. Rye and 100% whole wheat breads would be good choices to increase fiber. All choices would fit into a low fat diet except the croissant rolls, which are made with extra fat. Bread products, in general, are low in fat. Margarine, butter, mayonnaise and other spreads added to bread are common sources of fat.
LESSON 3. Becoming Acquainted with Yeast Bread Ingredients

Ingredients and their functions in yeast breads are explored. This would be a nice demonstration to introduce the lesson to members. This lesson contains two experiments with yeast, exposes the members to the traditional bread preparation techniques, and includes some conventional recipes. The 100% whole wheat bread recipe may be new to some members. Leaders should be sure to highlight the differences in quality markers between products made with enriched white and whole grain flours.

Activities: Let's Experiment - What Happens to Yeast when...Experiments 1 and 2
Let's Bake - Conventional Yeast Breads
Quiz Time

Let's Experiment

Experiment 1. This experiment shows that yeast tends to grow better with the right type of food. Mixtures with slow action (or none) will be ones using salt, milk and flour. The mixture that has sugar added will have the best action since yeast feeds on this simple carbohydrate. Be sure the water temperature is correct for this experiment (between 105 - 115°F).

Experiment 2. This demonstration shows the effects of water temperature on yeast growth. The boiling water will kill the yeast and the balloon should not inflate at all. Warm water should have the biggest balloon after 30 minutes. The ice water and yeast that is allowed to stand at room temperature should have some carbon dioxide produced as the water begins to warm and the yeast becomes more active. The yeast and ice water placed in the refrigerator will have little, if any, carbon dioxide in the balloon.

Let's Bake

To demonstrate conventional bread making techniques, you may assign individual members to each step of the process. You can use any of the recipes provided in the lesson. This lesson is a good working, hands-
on lesson in which members can mix, knead, shape and proof bread.

Optional activity: A bakery field trip would allow members to see commercial bread making.

Optional activity: Set up a judging situation in which members taste and evaluate loaves of white bread, whole wheat (half white, half whole wheat) and 100% whole wheat bread.

Quiz Time

Answers:
1. Oven spring is the rising that occurs in the first 8-10 minutes of baking.
2. Pan rising or proofing is when the shaped loaf of bread is allowed to rise before baking.
3. When dough is gently pulled into shape with your hands you are using the patting method for shaping dough into a loaf.
4. Kneading and shaping dough are easier if the dough is allowed to sit for 5-10 minutes to rest.
5. Yeast dough will rise more quickly in a dark and warm environment.
6. Punching down is when you push your fist gently into the center of the dough to help release gas bubbles.
7. Working dough in a rhythmic pushing, folding and turning action is kneading.
8. Doubled in bulk means the ball of dough is twice as big as it was at first.
9. As yeast grows and ferments it produces carbon dioxide and alcohol.
10. The gas bubbles produced by yeast are caught in the gluten structure of the bread dough and cause it to rise.

LESSON 4. Making Yeast Breads in Other Ways

This lesson reviews various yeast dough preparation techniques. Members will experiment with different types of bread and draw some of their own conclusions about preference.

Activities: Let's Experiment - What Oven Temperature

Let's Experiment

This activity helps 4-H members see how baking at different oven temperatures affects bread quality. The exercise calls for three ovens. It will be difficult to complete the activity all at one time in a home setting. Therefore, members can be assigned one part of the experiment to do at home and then bring their products to the meeting.

Leaders should be sure that members complete the activity by writing their descriptive statements of the bread and developing a recommendation on baking temperatures.

Optional activity: Take a trip to the library. Let members work in pairs or small groups to research the following topics: history of bread or bread making, breads of different countries, how people in other cultures make bread. Ask each pair or group to prepare a presentation for one of your meetings.

Optional activity: If you have persons in your community who can demonstrate breads of different cultures, invite them to a meeting.

LESSON 5. More on Making Yeast Breads

The topic for this lesson is convenience. The 4-H members learn ways to make breads and rolls more quickly and to bake at more convenient times.

Activities: Let's Experiment - To Knead or Not to Knead?
To Rise or Not to Rise?
Let's Review
Consumer's Choice

Let's Experiment

In this activity, 4-H members see what might happen to quality if they take too many shortcuts when making bread. The best rolls should come from situation B in which recommended kneading and rising times are followed. In situation A rolls will be underdeveloped due to the short kneading time. Rolls from situation C should be tougher because of overdevelopment of gluten structure. Situation D should produce rolls that are small and perhaps doughy. And in situation E, in which the rolls were allowed to rise too long, they will have a collapsed structure and may be dry.

If this experiment is to be completed at a meeting, leaders will need to carefully gauge the time to complete the various situations so that products can go into the oven at the right time. The approximate amounts of time from mixing until rolls are ready for the oven are:

Situation A - 40 minutes
Situation B - 45 minutes
Situation C - 50 minutes
Situation D - 10 minutes
Situation E - 70 minutes

Let's Review

Arrange for members to demonstrate or describe each method as a way to learn the following answers.

Answers:
1. b Mixing the undissolved dry yeast with the dry ingredients.
2. e Mixing, kneading and shaping the dough before refrigerating; rising takes place in the refrigerator.
3. c Making a batter of yeast, liquid, flour and sugar and letting it sit until it becomes bubbly.
4. a Softening the yeast in warm water; then adding other liquid and dry ingredients.
5. d Breadmaking in which the bread mixture is not kneaded; it is simply stirred down with a spoon; uses more liquid than most bread methods.

a. Conventional method
b. Rapid Mix method
c. Sponge method
d. Batter method
e. Coolrise method

Consumer's Choice
This activity points out that not everyone wants to make bread "from scratch." Members evaluate homemade, frozen bread dough and commercial pretzels. Cost, time and quality of the product are considered. Leaders should invite open, honest comments and accept the decision made by the group. Individual members may make the pretzels at home and bring samples to the meeting. Or, make the homemade pretzels at the meeting and bring samples of commercially made and frozen dough pretzels for comparison.

A side issue is the use of salt on the pretzels. This may lead to a discussion about sodium and dietary recommendations. Leaders may find out more about sodium from "How Much Sodium Are You Eating?" (CC 295), available through Extension offices.

LESSON 6. Finale
This lesson leaves breadmaking for the world of cakes and pastry. An important concept is that these items are not usually included in the bread and cereal group due to their higher sugar and fat content. However, healthier alternatives to traditional cake and pastry recipes are presented.

Activities: Let's Experiment - Consumer's Choice on Pie Crusts

Let's Experiment - Consumer's Choice on Pie Crusts
Leaders should divide the group to make the various pie crusts in the activity. Set up a judging situation in which the pie crusts are evaluated.

Optional activity: Invite a home economist who works as a foods judge to explain some pointers on judging. This person may participate with the 4-H members in the judging activity.

Optional activity: Share a meal together. Prepare Favorite Quiche (with whole wheat crust) and Ginger Cake. Let members plan other foods to complete the meal. While eating, discuss how your meal might be different from other meals that members eat.

IT'S TIME TO WRAP IT UP AGAIN
Be creative. Ask members to share what they've learned from this project. The bake sale service project is only one idea. The members of your group may have other ideas for sharing this project with their families, elderly persons, children, friends or other members of your community. Some suggestions are: tea for grandparents, party for young children, demonstration of bread products for senior citizens groups, or thank-you party for parents and other family members.

FAIR EXHIBITS
Whole Wheat Bread (Conventional)
White Bread (Sponge Method)
Casserole Swedish Rye
Anadama Bread
Coolrise Yeast Rolls (Cloverleaf Rolls)
Ginger Cake
Quick One-Egg Cake

SKILLS CHECKLIST
Before you leave this project, review the Skills Checklist with each member. Thirty of the 36 skills should be checked "Skills I Knew" and/or "New Skills Learned" before members move out of the project.