

Chapter Overview

Introduce the Chapter

In this chapter, students learn about the two major types of breads: quick breads and yeast breads. Students explore the methods for leavening quick breads and yeast breads, examine the two different methods used to make quick bread batter, and learn about the five basic categories of yeast breads.

Build Background

Ask students to brainstorm and list as many different types of breads as they can. Ask volunteers to share some of their answers with the class and explain whether they think the bread is a quick bread or a yeast bread. Then, ask students: Based on what you know about yeasts, what do you think is the difference between the two types of bread?



Explore the Photo

Caption Answer Nutrients found in bread include carbohydrates and dietary fiber.

Discussion Ask students: What is your favorite type of bread? What qualities make this bread your favorite? (*Answers will vary, but may include: flavor, appearance, texture.*)

Writing Activity

Editorial

This activity prompts students to write an editorial for the school newspaper in response to a bread ban. Editorials will vary as students may agree or disagree with the ban. Editorials should address the value, or lack thereof, of making and consuming bread and, if possible, use supportive data and statistics.

Quick & Yeast Breads

Writing Activity

Editorial

Bread Ban Imagine that you have a friend who has decided to stop eating bread in order to help maintain a healthy weight. Write an editorial for the school newspaper in response to this approach to weight loss. An editorial is a newspaper column that gives an author's opinion or perspective on a topic without using the first person.

Writing Tips Follow these steps to write an editorial:

- Analyze and interpret information, and express your perspective.
- Do not write in the first person.
- If possible, strengthen your perspective with data and statistics.

CLASSROOM Solutions

Print Resources

- 📁 Student Edition
- 📁 Teacher Wraparound Edition
- 📁 Student Activity Workbook
- 📁 Student Activity Workbook Teacher Annotated Edition

Technology Resources

- Presentation Plus!** provides visual teaching aids for every section.
- Online Learning Center** includes resources and activities for students and teachers.
- TeacherWorks Plus** is an electronic lesson planner that provides instant access to complete teacher resources in one convenient package.



Activate Prior Knowledge

Explore The Photo There are two main types of bread. *What nutrients are found in bread?*

Before You Read

Preview Think about the role that bread plays in your diet. Then skim through the chapter and consider what ingredients and methods are used to make it.

Read to Learn

Key Concepts

- Describe methods for making quick breads.
- Describe methods for making yeast breads.

Main Idea

D The two major types of breads are yeast breads and quick breads, which are prepared using different methods.

Content Vocabulary

You will find definitions for these words in the glossary at the back of this book.

- quick bread
- muffin method
- biscuit method
- cut in
- rolled biscuit
- knead
- drop biscuit
- yeast bread
- fermentation
- conventional method
- quick-mix method
- score

Academic Vocabulary


You will find these words in your reading and on your tests. Use the glossary to look up their definitions if necessary.

- symmetrical
- pliable

Graphic Organizer

Use a graphic organizer like the one below to note how yeast causes bread to rise, to form more gluten, and to be more flavorful.

CAUSE	EFFECT

 **Graphic Organizer** Go to this book's Online Learning Center at glencoe.com to print out this graphic organizer.

Academic Standards

 English Language Arts

NCTE 12 Use language to achieve individual purposes.

 Mathematics

NCTM Number and Operations Compute fluently and make reasonable estimates.

 Science

NSES B Develop an understanding of chemical reactions.

 Social Studies

NCSS VIII B Science, Technology, and Society Make judgments about how science and technology can transform the physical world and human society.

NCTE National Council of Teachers of English

NCTM National Council of Teachers of Mathematics

NSES National Science Education Standards

NCSS National Council for the Social Studies

BFCN

FOCUS

Bell Ringer Activity


Comparing Quality

Ask students to think about the similarities and differences between the quality of homemade or bakery bread and prepackaged bread that you might find in the supermarket. Ask students: How do the breads compare in terms of smell, feel, texture, and taste? Then ask students: Where would you prefer to get bread and why?

Preteaching Vocabulary

Have students write their own definition for each content and academic vocabulary term.

Graphic Organizer

 The graphic organizer is also on the TeacherWorks CD. (The cause cell that explains how bread rises should note that yeast produces alcohol and carbon dioxide gas in a process called fermentation, and that the gas leavens the bread, or causes it to rise. The cause cell that explains how bread forms more gluten should note that gas in the bread moves protein and water molecules, which enables them to form more gluten. The cause cell that explains how bread gets flavor should note that fermentation creates by-products such as alcohols, amino acids, and fatty acids that add flavor.)

Before You Read

Point out to students that quick breads are made with leavening agents that allow immediate baking. Yeast breads, on the other hand, are leavened with yeast and must be kneaded and allowed to rise before baking.

D Develop Concepts

Main Idea Discuss the main idea with students. Ask students: Which type of bread do you think is more economical—quick breads or yeast breads? (Students may say that quick breads are more economical because of their method of preparation. Quick breads allow you to create fresh, homemade bread in less time.)

NCLB

NCLB connects academic correlations to book content.

TEACH

Discussion Starter

Is That a Quick Bread? Write the following breads on the board: bagel, coffee cake, powder biscuit, pancake. Ask students: Can you distinguish between quick breads and yeast breads based on appearance alone? Which of these breads is not a quick bread? What factors did you consider in making a decision? (Students may say you cannot distinguish between a quick bread and yeast bread based on appearance. The bagel is not a quick bread, it is a yeast bread. This can be determined by reading the recipe, or knowing how each food is prepared. Students may say that they know that coffee cake, powder biscuits, and pancakes do not need time to rise or require kneading in their preparation because they are not made with yeast.)

U Universal Access Interpersonal Learners

Comparing Quick Breads Ask students to work in groups and identify a type of quick bread they wish to research, such as banana nut bread, blueberry muffins, or crepes. Ask groups to use the library or cookbooks to find at least three recipes for the quick bread they selected. Have groups write a brief paragraph comparing the recipes both in terms of ingredients and preparation techniques. Do they differ in preparation or ingredients? Is one more healthful than the others? Which is more appealing and why? (Answers will vary, depending upon students' recipes. Ask groups to share their paragraphs with the class.) **ELL**

NCLB Activity correlated to Mathematics standards.

Making Quick Breads

Breads come in two major types: quick breads, such as biscuits and muffins, and yeast breads, such as sandwich breads. A **quick bread** is a bread leavened by agents that allow speedy baking, such as air, steam, baking soda, and baking powder.

Two basic mixing methods are used for quick bread batter: the muffin method and the biscuit method.

Muffin Method

The **muffin method** is a method of making quick breads in which liquid ingredients are lightly mixed into dry ingredients to create a batter with a slightly coarse yet tender texture. Use the muffin method to make a pour batter or a drop batter for pancakes, muffins, some coffeecakes, fruit and nut loaves, and a soft cornbread casserole called spoon bread.

The challenge with the muffin method is to avoid over mixing. Recipes that use the muffin method contain little fat, so beating the ingredients produces a chewy, heavy texture. Muffins end up with air spaces, or tunnels, on the inside and peaks on top.

To get a tender texture, follow these steps:

- 1. Measure ingredients.** Measure all ingredients accurately.
- 2. Mix the dry ingredients.** Sift the dry ingredients together in a mixing bowl. If you are using whole-grain flour, blend ingredients thoroughly with a spoon or whisk instead.
- 3. Mix the liquid ingredients.** In a small bowl, beat all liquid ingredients—eggs, milk or water, oil or melted fat, and flavorings—until well blended.
- 4. Make a well.** Using the back of a spoon, make a well in the center of the dry mixture.
- 5. Pour and fold.** Pour the liquid all at once into the well in the dry ingredients. Fold in the dry ingredients just until they are moistened. Use as few strokes as possible. A few floury streaks can remain, and the batter should be lumpy.

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Kitchen Math

Changing Portion Size

Sylvia has a new recipe for blueberry muffins that she would like to try. The recipe yields 8 large muffins, but Sylvia prefers to use her mini-muffin baking pan to make 24 smaller muffins. If the recipe indicates that a large muffin has 383 calories and 16.1 grams of fat, how many calories and fat grams will each smaller-sized muffin have?

Math Concept Multi-Step Problems Think through the steps before you start. If you calculate the calories and fat grams for all muffins combined, you can then divide by 24 to find the per-muffin amounts.

Starting Hint Determine the total calories in a batch of muffins by multiplying 383 by 8. All of the smaller muffins combined will have this same number of total calories. Divide by 24 to find the calories per small muffin. Perform similar calculations to find fat grams in the smaller muffins.

Math Appendix For math help, go to the Math Appendix at the back of the book.

NCTM Number and Operations Compute fluently and make reasonable estimates.

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For muffins or bread, gently spoon the batter into greased muffin tins or loaf pans. You can also line muffin pans with paper baking cups. Fill cups no more than two-thirds full to avoid overflows.

For pancakes, pour small amounts of the batter onto a hot, greased skillet or griddle, making a few at a time. Bake waffles in a waffle iron according to the owner's manual.

Testing for Doneness

Learn to spot the signs of doneness in different types of quick breads made using the muffin method.

Muffins Finished muffins will be lightly browned with rounded, pebbly tops. Remove them from the tins immediately unless the recipe states otherwise. A well-made muffin has a **symmetrical**, or balanced, shape and is fine, light, and tender on the inside.

U

Kitchen Math

Answer There are $383 \times 8 = 3,064$ calories and $16.1 \times 8 = 128.8$ fat grams in the entire recipe. Thus, each small muffin will have $3,064 \div 24 \approx 128$ calories and $128.8 \div 24 \approx 5.4$ grams of fat.

Professional Development



Mini Clip Math: Guiding Questions

A teacher uses guiding questions to help students review vocabulary necessary for the lesson she will teach.

TEACH *cont.***C** Critical Thinking

Analyze Reactions Read students the following scenario: Omar is preparing a batch of pumpkin chocolate chip muffins for a brunch with friends. After measuring all the ingredients, he mixes the liquid ingredients together in a bowl and then adds each of the dry ingredients separately. Ask students: What has Omar done wrong? What might happen to Omar's muffins? (Answers will vary. Students should show an understanding of the steps involved in the muffin method. Students might say Omar should have sifted all the dry ingredients together first, and then slowly added the liquids to the dry ingredients. This ensures uniformity and prevents large holes inside the muffins. This is especially important when a recipe calls for baking soda because it reacts with acidic liquids instantly, causing gas to escape before baking which will make Omar's muffins fall flat.)

**The Muffin Method**

To make quick breads using the muffin method, sift dry ingredients together and make a well in the center (left). Beat the liquid ingredients in a separate bowl (center). Pour the liquid mixture into the well all at once (right). Fold together without over mixing. *What happens to quick bread batter if you over mix it?*

Loaf Breads Finished loaf breads will be lightly browned and have pulled away slightly from the sides of the pan. They should have a center crack and feel firm when tapped. Follow recipe directions for removing loaf breads from the pan.

Pancakes To know when pancakes are ready to turn, look for dry edges and bubbles starting to break on top. Cook until the underside is golden.

Muffins and pancakes are best served fresh and warm, though they can also be reheated. Allow loaf breads to cool completely before serving. During cooling, the flavors blend and the texture firms, making the loaf easier to slice.

Biscuit Method

The **biscuit method** gives a flaky layering and is used for making biscuits, scones, and shortcakes. To use the biscuit method, cut solid fat into the dry ingredients before lightly mixing in the liquids. To **cut in** means to mix solid fat and flour using a pastry blender or two knives and a cutting motion. Cutting in disperses fine fat particles in the dough. During baking, the fat melts between layers of flour, and its liquid content turns to steam, giving rise to a flaky biscuit.

Biscuits use a higher ratio of flour to liquid than muffins, making a dough rather than a batter. Roll them out and cut them or drop them onto a cookie sheet, depending on the amount of liquid in the recipe.

SAFETY MATTERS**Safe Work Surfaces**

To ensure food safety and quality, always clean the work surface on which you will mix baking ingredients. Invisible bacteria and other debris, such as leftover food crumbs, can get on your mixing utensil each time you rest it on the counter, and end up in your mix. A clean work surface is also very important for bakers who mix their liquid and dry ingredients right on a table or countertop, rather than in a bowl. Before baking, use a clean sponge or cloth, hot water, and non toxic cleanser or dish soap to wipe down work surfaces and dry them thoroughly.

What Would You Do? You are about to mix bread ingredients on a countertop in the foods lab. The team that used the lab before you was supposed to have cleaned it, and you see no signs of dirt.

SAFETY MATTERS

Answer Answers should all say that you should clean the countertop before beginning since you cannot be sure it has been cleaned.

Explore the Photo

Caption Answer Over mixing produces a chewy, heavy texture.

Discussion Ask students: What happens to muffins if you over mix the batter? (Muffins end up with air spaces, or tunnels on the inside and peaks on the top.)



TEACH cont.

S₁ Skill Practice
Guided Practice

List Ask students to list the six steps of the biscuit method. (Students should list the six steps shown on page 670.) L1 ELL

Explain Ask students to explain why it is important to cut solid fat into dry ingredients before adding liquids. (It is important to cut solid fat into the dry ingredients before lightly mixing in the liquids because cutting disperses fine fat particles in the dough. During baking, the fat melts between layers of flour, and its liquid content turns to steam, giving rise to a flaky biscuit.) L2

Apply Tell students: You are making buttermilk biscuits for a family breakfast. Your younger sister wants to help but when you ask her to cut the shortening into the flour mixture, she is not sure what to do and says that this is not how she makes muffins. Ask students to write a paragraph in which they describe what they would tell their sister about “cutting in” the fat and explain how the biscuit method differs from the muffin method. (Paragraphs will vary, but may include: To “cut in” means to mix solid fat and flour using a pastry blender or two knives and a cutting motion. Biscuits use the biscuit method, where the fat is cut into the ingredients before the dry ingredients are added. With muffins, you mix the dry ingredients first and then slowly add the liquid ingredients.) L3

NCLB Activity correlated to Science standards.

Follow these steps when using the biscuit method:

- 1. Measure ingredients.** Make sure measurements are accurate.
- 2. Combine the dry ingredients.** Sift together the dry ingredients in a large mixing bowl.
- 3. Combine the liquids.** Mix the wet ingredients in a separate bowl until well blended.
- 4. Cut in the fat.** Cut the fat into the flour until the particles are the size of peas or coarse bread crumbs. Use cold fat, which cuts in more quickly and makes a lighter texture.
- 5. Make a well.** Using the back of a spoon, make a well in the center of the dry mixture.
- 6. Pour and mix.** Pour the liquid all at once into the well. Using a fork, mix until the dry ingredients are just moistened.

S₁

Rolled Biscuits

A **rolled biscuit** is a biscuit that is lightly kneaded, rolled out to an even thickness, and cut to biscuit size before baking. To **knead** means to work dough with the hands to combine ingredients and develop gluten. In order to create a light, flaky product, very little kneading is done with rolled biscuits.

S₂Science in Action
Pre-fermenting

Rather than simply dissolving yeast and adding it directly to a bread recipe, some bakers use a starter, also known as a pre-ferment or sponge. A starter is a mix of flour, water, and yeast that has already fermented together in a bowl for a period of time.

Procedure Conduct research to answer these questions: Why do starter ingredients combined in a container rise to three times their size? How does using a starter affect the flavor of bread? Why is sourdough bread often made with starter rather than conventional yeast?

Analysis Using what you know of yeast and fermentation, as well as critical thinking skills, write at least one sentence to answer each of the questions.

NSES B Develop an understanding of chemical reactions.

NCLB

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The dough for rolled biscuits should “clean” the sides of the bowl, which means that it holds together in a ball and no longer sticks to the bowl. After the dough reaches this stage, follow these steps:

- 1. Turn out the dough onto a board.** Sprinkle just enough flour on the dough to keep it from sticking to the board. Too much flour toughens the texture.
- 2. Knead and fold the dough.** Make sure to knead the dough lightly, using only your fingertips. This keeps the fat from melting in the dough. If necessary to avoid sticking, dust your hands with a little flour. Gently fold the dough in half toward you and give it a quarter turn. Continue to knead gently, fold, and turn as directed in the recipe, usually six turns or fewer. The dough should lose its stickiness. Overworking the dough creates tough, compact biscuits.
- 3. Roll the dough.** Roll out the dough gently to about ½-inch thickness using a lightly floured rolling pin on a clean, lightly floured surface. Keep the dough circular to avoid waste when cutting. Maintain an even thickness so that the biscuits bake evenly. Dust the board and rolling pin with flour only as needed to prevent sticking.

S₂

4. Cut the dough. Using a biscuit cutter or the rim of a beverage glass lightly dipped in flour, cut straight down through the dough. (A twisting or turning motion can pull the biscuit out of shape.) You can cut square biscuits with a sharp knife dipped in flour. Work carefully to avoid tearing or pulling the dough. You can use cookie cutters, if they are deep enough to cut without flattening the dough. Scones are usually cut into wedges.

5. Gather leftover dough. Pat together leftover dough, roll it again, and cut it. Handle it as little as possible so that it remains tender and flaky.

6. Place and bake. Use a wide spatula to place the biscuits about 1 inch apart on an ungreased baking sheet. Bake as the recipe directs. Some cooks place the baking sheet in the refrigerator for 10–15 minutes before baking so that the butter will be firm when the biscuits go into the oven.

Science in Action

Answer Starter ingredients are combined in a container three times

their size to allow them to grow, because, as the text explains, fermentation causes rising. Using a starter will impart a tangier, sour, or complex flavor to bread because the starter has already fermented for a period, and, since fermentation creates by-products that add more flavor, the longer the starter has fermented, the more flavor it will impart. A starter gives sourdough bread its characteristic tangy, sour flavor.

Mc
Graw
Hill Professional
DevelopmentMini Clip
ELL: Reading Aloud

A teacher reads aloud, modeling fluency, pronunciation, expression, and comprehension strategies.

TEACH *cont.*

The Marvel of Yeast

Yeast is a fungus that causes bread to rise through fermentation. In this process, carbohydrates break down to produce carbon dioxide for leavening. *What is the difference between basic white bread and batter bread?*

Drop Biscuits

A **drop biscuit** is a biscuit made with more liquid in proportion to flour than a rolled biscuit. You can turn a rolled biscuit into a drop biscuit by increasing its liquid content. The sticky dough holds its shape when mounded but does not clean the sides of the bowl. It is not kneaded or rolled. Oil sometimes replaces solid fat, and the muffin method may be used for mixing. These differences make drop biscuits more mealy than flaky.

To form drop biscuits, place large spoonfuls of dough about 1 inch apart on a greased cookie sheet, or use muffin tins for a more symmetrical shape. Bake according to recipe directions. You can also spoon drop biscuits onto a casserole as a topping or onto a fruit filling to make a cobbler.

Testing for Doneness

Both rolled and drop biscuits double in size when they bake. Rolled biscuits have golden brown tops and straight, cream-colored sides. Drop biscuits have golden brown, irregular contours.

Reading Check **Explain** How do you cut in ingredients?

Making Yeast Breads

A **yeast bread** is a bread leavened with yeast. Yeast is used in many kinds of bread, including sandwich bread, pizza crusts, pita bread, rolls, pretzels, pastries, and bagels.

The dough for yeast bread must be well kneaded and allowed to rise before baking. It takes longer to make yeast breads than quick breads, but the process is not difficult. “Hands-on” steps of kneading and shaping dough alternate with “hands-off” stages of letting dough rise. Some recipes can be started one day and finished the next.

How Yeast Works

How does yeast make bread rise? Yeast, and the enzymes in yeast, produce alcohols and carbon dioxide gas by breaking down carbohydrates, a process called **fermentation**. As the gas leavens the bread, it moves protein and water molecules, enabling them to form more gluten. In addition to causing rising, fermentation creates by-products such as alcohols, amino acids, and fatty acids, that add flavor.

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S₂ Skill Practice Guided Practice

Identify Ask students to identify how drop biscuits are different from rolled biscuits. (Drop biscuits have more liquid, are not kneaded or cut to biscuit size, and their texture is more mealy than flaky. Rolled biscuits use less liquid, are lightly kneaded and rolled out, cut into biscuit size before baking, and their texture is light and flaky.) **L1**

Explain Ask students to identify how drop biscuits are different from rolled biscuits and explain how you can turn a rolled biscuit into a drop biscuit. (Drop biscuits have more liquid, are not kneaded or cut to biscuit size before baking, their texture is more mealy than flaky, and they have golden brown, irregular contours. Rolled biscuits use less liquid, are lightly kneaded and rolled out, and cut into biscuit size before baking. Their texture is light and flaky and they have golden brown tops and straight, cream-colored sides. You can turn a rolled biscuit into a drop biscuit by increasing the liquid content.) **L2**

Apply Ask students to write a paragraph in which they describe the signs of well-made biscuits. (Paragraphs will vary, but may include: Rolled biscuits are done when they have doubled in size and have a golden brown top and straight, cream-colored sides. Drop biscuits are done when they have doubled in size and have golden brown, irregular contours.) **L3**

Reading Check

Explain To cut in ingredients, mix solid fat and flour by using a pastry blender or two knives and a cutting motion.

Explore the Photo

Caption Answer Batter bread has the same ingredients as basic white bread (all-purpose flour, yeast, salt, sugar, fat, and water or milk), but has more liquid. It is beaten rather than kneaded and has a lighter texture.

Discussion Ask students: What are some examples of yeast breads? (Answers will vary, but may include: loaf breads, Italian or French bread, pizza dough, pita bread, bagels, soft pretzels, and rolls.)

TEACH *cont.***S₁** Skill Practice
Guided Practice

Identify Ask students to identify two methods for mixing yeast dough. (*conventional method, quick-mix method*) **L1**

Explain Ask students to identify two methods for mixing yeast dough and explain why ingredients for yeast bread should be at room temperature. (*Answers will vary, but may include: You can choose from two methods for mixing yeast dough: the conventional method and the quick-mix method. For both methods, bring all ingredients to room temperature to promote yeast growth.*) **L2**

Apply Have students write a paragraph in which they describe the conventional method for mixing yeast dough. Ask students: Why should ingredients be at room temperature? How can you check the water temperature? Why do recipes for yeast bread give a range for the amount of flour? (*Paragraphs will vary, but may include: The conventional method is a method of mixing yeast dough in which the yeast is first dissolved in warm water to activate growth. All ingredients should be brought to room temperature to promote yeast growth. Water temperature is also critical because yeast will not grow if the water is too cool and it will die if the water is too hot. To check the water temperature, use a candy thermometer. Water should be about 105° to 115°. Recipes may give a range for the amount of flour rather than an exact amount because flour varies in the amount of liquid it can absorb. On humid days, for example, flour absorbs less liquid because it has already taken in some moisture from the air.*) **L3**

Types of Yeast Breads

Yeast breads fall into five basic categories:

Basic White Bread Basic white bread is made with all-purpose flour, yeast, salt, sugar, fat, and water or milk.

Batter Bread Additional liquid and beating instead of kneading differentiates batter bread from basic white bread. The result is a lighter texture.

Sweet White Bread Basic white bread ingredients plus butter, eggs, extra sugar, and sometimes nuts and fruits, create a sweet white bread. Pecan rolls and coffeecakes are examples.

Whole-Grain Bread Whole-grain bread is always made with whole-grain flour, but this may replace part or all of the all-purpose flour in basic white bread. Gluten flour may be added to lighten the loaf. It is possible to substitute whole-grain flour for up to half of the total flour in most recipes.


Sourdough Bread Leavened with a well-fermented mixture of yeast, water, and flour, sourdough bread has a tangy flavor and a chewy texture.

Be a Smart Consumer

Bread Machines

Thanks to bread machines, consumers can have fresh, hot bread without much effort. To use a bread machine, simply put the ingredients in the appropriate compartment, program the machine, and let it handle the rest. These appliances come in a variety of forms and offer several different functions. They can produce round, square, and rectangular loaves, operate at different cycles, and be adjusted to enhance crustiness or work with different flours. Some include removable bread pans, a “keep warm” feature, and a delayed start function.

Challenge List the pros and cons you perceive in bread machines. What are the positive aspects of using one and what, if any, are the drawbacks?



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Mixing Yeast Dough

Mixing is the first step in making yeast bread. Mixing both combines the ingredients and activates the yeast. When yeast produces carbon dioxide, gluten in the flour stretches and dough rises. Gluten traps carbon dioxide, forming tiny pockets in the dough. Bread flour is an excellent gluten producer, which makes it ideal for making yeast dough. All-purpose flour is a less expensive, satisfying substitute.

You can choose from two methods for mixing yeast dough: the conventional method and the quick-mix method. For both methods, bring all ingredients to room temperature to promote yeast growth.

Conventional Method

The **conventional method** is a method of mixing yeast dough in which the yeast is first dissolved in warm water to activate growth. Dissolving yeast is also a method of testing yeast, called proofing. Temperature is critical. Yeast will not grow if the water is too cool. Yeast will die if the water is too hot. Check the water temperature with a candy thermometer if you have one. Otherwise, let a drop fall on the inside of your forearm. It should feel pleasantly warm.

The steps in the conventional method are:

- 1. Dissolve the yeast in water.** Use water that is about 105° to 115° and let the mixture stand for 5 to 10 minutes.
- 2. Heat the liquid.** Heat the fat, sugar, and liquid until the fat melts. Cool the mixture to lukewarm.
- 3. Mix in the yeast.** Add the dissolved yeast to the liquid, along with any eggs in the recipe.
- 4. Mix in the flour.** Add enough flour to make a soft or stiff dough, as the recipe indicates. Recipes may give a range for the amount of flour rather than an exact amount. This is because flour varies in how much liquid it can absorb. On humid days, for instance, flour absorbs less liquid because it has already taken in some moisture from the air. There is enough flour when the dough cleans the sides of the bowl.

Be a Smart Consumer

Answer Answers will vary. Pros may include ease of making fresh bread. Cons will include being locked into a particular shape and that you can only make a specific amount of bread at once.



Punch Down

Once a yeast dough has risen, it must be punched down to let excess gases escape. *What affect does punching down have on the texture of bread.*

Quick-Mix Method

The **quick-mix method** is a method of mixing yeast dough in which dry yeast is combined with the dry ingredients and then with a liquid. The liquids must be warmer than in the conventional method because the dry ingredients absorb some of the heat. You can use a standard electric mixer until the dough thickens and becomes too heavy. Then switch to a sturdy spoon. The mixer develops gluten, cutting down on kneading time later. Some mixers have paddles that allow you to mix the dough fully.

The steps in the quick-mix method are:

- 1. Mix the dry ingredients.** Combine part of the flour with the undissolved yeast, sugar, and salt in a large bowl.
- 2. Heat the liquid.** Heat the liquid and fat to between 120° and 130°.
- 3. Beat the dough.** Add the liquid to the dry ingredients and beat until well blended. Make sure all the flour is incorporated.
- 4. Add flour.** Add just enough of the remaining flour to make the kind of dough specified in the recipe. Pay attention to recipe directions that explain how wet or dry a dough should be.

Kneading Yeast Dough

Except for batter breads, most yeast doughs must be kneaded to develop a strong gluten structure that holds up when the dough rises. You can use your hands or a food processor or heavy-duty mixer with a dough hook, which saves a few minutes and some labor.

Follow these steps to knead yeast dough:

- 1. Turn out the dough.** Sprinkle a clean work surface and your hands with just enough flour to keep the dough from sticking. If the dough absorbs too much extra flour, the bread will be dry and tough. Turn the ball of dough out on the surface and flatten it slightly.
- 2. Push the dough.** With the heels of both hands, press the top of the dough and push away from you.
- 3. Fold the dough.** Pull the far side of the dough toward you, folding the dough in half.
- 4. Turn the dough.** Rotate the dough one quarter turn.
- 5. Knead the dough until glossy.** Continue the push, fold, and turn technique for 8 to 10 minutes, using a steady rhythm. When the rough, sticky mass becomes a smooth, glossy, elastic ball, it is ready to let rise.

S₂ Skill Practice Guided Practice

Identify In one sentence, have students identify why the quick-mix method of making yeast dough is much faster than the conventional method. (Answers will vary, but may include: The quick-mix method of making yeast dough is much faster than the conventional method because it uses a kitchen appliance, such as a standard electric mixer; to do some of the dough mixing.) **L1**

Create Ask students to use a graphic organizer to illustrate the steps in making a quick-mix yeast dough. (Organizers will vary, but may include: 1. Combine and mix the flour with the undissolved yeast, sugar, and salt in a large bowl; 2. Heat the liquid and fat to between 120° and 130°; 3. Add the liquid to the dry ingredients and beat the dough until well blended; 4. Add just enough of the remaining flour to make the kind of dough specified in the recipe.) **L2 ELL**

Apply Have students create a brochure that describes how to make a quick-mix yeast dough and explains why liquids must be warmer when making a quick-mix yeast dough than in the conventional method. (Brochures will vary, but may include: First, combine and mix the flour with the yeast, sugar, and salt in a large bowl. Then, heat the liquid and fat to between 120° and 130°. Add the liquid to the dry ingredients and beat the dough until well blended. Finally, add just enough of the remaining flour to make the kind of dough specified in the recipe. The ingredients must be warmer than in the quick-mix method than in the conventional method because the dry ingredients absorb some of the heat.) **L3 ELL**

Explore the Photo

Caption Answer The dough will turn from a rough, sticky mass to a smooth, glossy, elastic ball.

Discussion Ask students: How is kneading yeast dough different from kneading biscuit dough? (Answers will vary, but may include: With yeast breads, you use the heels of your hands, not your fingers, and it is kneaded much longer than biscuit dough.)

ASSESS

Quiz

Ask students to answer the following questions:

1. Define both quick bread and yeast bread. (A quick bread is a bread leavened by agents that allow speedy baking, such as air, steam, baking soda, and baking powder. A yeast bread is a bread leavened with yeast.)
2. What is fermentation and why is it important in making yeast breads? How does yeast make bread rise? (Fermentation is the process in which yeast, and the enzymes in yeast, produce alcohols and carbon dioxide gas by breaking down carbohydrates. As the gas leavens the bread, it moves protein and water molecules, enabling them to form more gluten. Fermentation causes bread to rise, and creates by-products such as alcohols, amino acids, and fatty acids, that add flavor.)
3. With which mixing method is yeast first dissolved in warm water to activate growth? (conventional method)

Letting Yeast Dough Rise

The next step after kneading is to let the dough rise. Rising allows yeast colonies to multiply and flavors to develop. Recipes that use quick-rise yeast can be baked after only one rise. Recipes that use regular yeast must rise twice, once after kneading and again after the dough is shaped.

For the first rising, place the ball-shaped dough in a large, lightly greased bowl. The bowl must be large enough to allow the dough to double in size. Turn the dough over so the greased surface is on top, and press plastic wrap lightly onto it. This helps keep the dough from forming a crust or drying out, both of which limit yeast growth. Cover the bowl with a clean, dry dish towel or another sheet of plastic wrap stretched tightly to the edges of the bowl. You can put batter breads directly into the baking pan to rise.

Choose a warm place for the dough to rise. A temperature of 75° to 85° is ideal. Avoid drafts, which cool the dough, as well as radiators and furnace vents, which cook it. If you cannot find a suitable spot, make one by filling a large bowl two-thirds full of hot water and setting the dough on a wire rack over the water. Replace water as it cools with hot water. You can also use a microwave oven, but check the owner's manual for specific instructions. In most microwaves, you warm the oven, leave it off for a time, then warm it again.

Let the dough rise until it doubles in bulk, usually about 1 to 1½ hours. Stiff doughs and doughs made with whole-grain flour or nuts and fruits take longest to rise. Allow extra time for refrigerated dough. If you use quick-rising yeast, check the package to estimate rising time.

To test the dough, gently poke two fingers about ½ inch into the surface. If a dent remains, the dough is ready to shape. If the dent springs back, let the dough rise a little longer and then test it again.

TECHNOLOGY FOR TOMORROW

Mass-Produced Breads

Although there has been a resurgence in the popularity of artisanal breads—which are prepared in small batches using old-fashioned recipes and methods—most Americans also consume mass-produced breads. Technology has made it possible for factories to make a quarter of a million loaves of such breads daily, but some quality is lost in producing such large quantities. Because mass-produced breads are baked at temperatures up to 400°, many nutrients in the flour are depleted. Most mass-produced breads have a softer texture than their artisanal counterparts. They also contain chemical additives, including preservatives, which allow them to be shipped long distances to supermarkets and remain on shelves without spoiling.

Get Involved Go to your local supermarket. See if you can find any mass-produced breads that are high in nutrients and free of chemical preservatives. Share your findings with the class.

NCCS VIII B Science, Technology, and Society Make judgments about how science and technology can transform the physical world and human society.

Punching Down Yeast Dough

Once dough has risen, it must be punched down. Punching down lets excess gases escape, making the dough easier to shape. It gives the bread a fine texture by eliminating large air bubbles, which would leave large holes during baking. Punching down also redistributes yeast cells, giving them fresh sugar and starch molecules to feed on as fuel for the second rising.

To punch down, thrust your fist into the center of the dough with one quick punch. Then pull the dough away from the sides of the bowl and press it down toward the center to form a ball. Turn the dough out on a lightly floured surface. To make it more flexible, you can let the dough rest for about 10 minutes after punching down.

After it is punched down, the dough is ready to be shaped. Cover and refrigerate it overnight if needed. The dough will rise slowly.

Batter breads are stirred down rather than punched down. Stir the batter with a sturdy spoon until it is close to its original size. Spread the dough in the baking pan for the second rising.

TECHNOLOGY FOR TOMORROW

Answer Mass-produced breads are the type available in supermarkets, pre-sliced and packaged in plastic bags. Students' findings will vary, but it is possible to find mass-produced breads that are rich in nutrients as well as preservative-free mass-produced breads. Examples include preservative-free whole grain or sprouted varieties. These breads may be stored in a special refrigerated section.

Activity correlated to Social Studies standards.

RETEACH

W Writing Support
Editorial

To Be Free or Not to Be Free Tell students: You just read an article in a magazine entitled “Down with Dough Conformity!” that suggests that all breads should be baked free-form without pans to mold them to their shape. Write a newspaper editorial in response to the article’s allegations. Remind students that an editorial is a newspaper column that gives an author’s opinion or perspective on a topic without using the first person. (For tips on writing an editorial, see page 666. Editorials will vary as students may agree or disagree with the article. Editorials should address whether students are for or against free-form baking.)

R Reading Strategy

Summarize Ask students to summarize the steps to shape a loaf for baking. (Students’ summaries will vary, but should include short descriptions of the following three steps: 1. flatten the dough, 2. roll up the dough, 3. pinch and seal the roll.)

**Avoid Damaging the Dough**

Bread dough is usually shaped into a loaf. *Why is it important to use a knife or scissors to cut bread dough rather than tearing the dough?*

Shaping Yeast Dough and the Second Rise

Bread dough is usually shaped into a loaf. Some breads are baked free-form on a baking sheet. Some doughs are cut and rolled into several small balls. Other breads are placed in pans to set their shape. Usually the dough is cut in half before baking. Use kitchen shears, a sharp knife, or a bench scraper to cut the dough. Do not tear the dough, because this stretches, weakens, and damages the strands of gluten.

Follow these steps to shape a loaf for baking:

1. Flatten the dough. Flour the work surface lightly. With a rolling pin, roll the dough into an 8 × 10 inch rectangle. Make sure the dough is the same thickness throughout. Roll out the bubbles in the edges.

2. Roll up the dough. Starting at one of the short ends, roll up the dough tightly. This helps press out air.

3. Pinch and seal the roll. Turn the roll so the seam is on top. With your fingers, pinch the seam edge to the roll so it stays closed. Turn the roll seam-side down. Hold your hands with palms pressed together. With the bottom edge of your hands, press down on both ends of the roll, about ¼ inch inside the edge, to pinch and seal the ends. Tuck the flattened ends under the roll. Then turn the roll upside down and pinch the ends into it. Place the roll seam-side down in a greased loaf pan.

Yeast dough is very **pliable**, or supple, and accepts many different shapes. You can make a braid, a wreath, or a braided wreath. Twist rolls into figure-eights, cloverleaves, sailor’s knots, or crescents. Challah is a traditional Jewish bread made by braiding as many as six strands of dough. Stick smaller balls on larger ones for bunny heads or teddy bears.

Place the shaped dough in the baking pans. Cover it with a dry dish towel and let it rise again until it doubles in size. The second rising usually takes less time than the first rising.

Explore the Photo

Caption Answer Tearing dough stretches the gluten strands and weakens the structure of the bread.

Discussion Ask students: How do you check a bread for doneness? (Remove the loaf from its pan and tap the bottom and sides. Well-baked bread sounds hollow. A dull thud means the bread should be put back in the pan and continue baking.)

RETEACH cont.

C Critical Thinking
Make Predictions Ask students: What might happen to a loaf of yeast bread if you do not preheat the oven before your bread finishes rising? (Answers will vary, but students should identify that the oven may not be hot enough to cause a final burst of fermentation and rising called oven spring, and that, if the bread sits too long, the loaf could fall and end up tasting yeasty after baking. Have students share their responses with the class.)

ASSESS

Study Tools
 Have students go to the Online Learning Center at glencoe.com:

- Take the **Practice Test**.
- Download **Study-to-Go** content.

Use the **Student Activity Workbook** for additional practice.



Baking Yeast Dough

Preheat the oven before the bread finishes rising. You may also choose to score the loaves just before baking. To **score** means to make slashes about 1/2 inch deep across the top of the bread. Scoring prevents the crust from cracking as the dough rises. Diagonal scoring adds a decorative touch.

The heat of the oven gives yeast one last burst of activity, resulting in a sudden rising called oven spring. This indicates a good start, and a nicely browned crust indicates the bread is nearly finished baking. Baking times vary considerably, however, so always bake as

directed in the recipe. To check for doneness, remove the loaf from its pan and tap the bottom and sides. Well-baked bread sounds hollow. If you hear a dull thud, put the bread back in the pan and continue baking.

As soon as bread is done, remove it from the pan and place it on a wire cooling rack. Keep the bread away from drafts, because rapid cooling can crack the crust top. Let loaves stand about 20 minutes for easier slicing. Always use a serrated knife to cut bread. A well-baked loaf is smooth, rounded, and nicely browned. Inside, the bread has a soft and springy texture that is consistently fine throughout.

Light and Healthy Recipe

Buttermilk Biscuits

Ingredients

- 1 1/2 cups All-purpose flour
- 1/2 cup Whole wheat flour
- 1 tsp. Salt
- 1 tsp. Baking powder
- 1/2 tsp Baking soda
- 1/4 cup Butter
- 3/4 cup Buttermilk

Directions

1. Preheat oven to 500°.
2. In a large mixing bowl, combine the two flours with the salt, baking powder and baking soda. Mix well.
3. Cut in the butter. It may be easier to work the butter into the flour with your hands until the butter is reduced to pea-sized bits.
4. Add the buttermilk and mix with your hands just until the dough can be put out on a table.
5. Roll out the dough and with a cutter or a wide glass, cut out circles of dough. When you can not cut out any more circles, push the dough together. Do not roll out again. Cut out more circles.
6. Place the circles on a baking sheet and bake in the oven until golden brown.
7. Biscuits are best when served hot.

This easy-to-make biscuit recipe includes whole wheat flour, adding texture and fiber.

Yield 8 servings

Nutrition Analysis per Serving

■ Calories	171
■ Total fat	6 g
Saturated fat	4 g
Cholesterol	16 mg
■ Sodium	316 mg
■ Carbohydrate	24 g
Dietary fiber	2 g
Sugars	1 g
■ Protein	4 g

CLOSE

Bread Exhibit Display several pictures of quick breads and yeast breads. Ask students if they can identify each bread, name the major ingredients, explain how the dough or batter was mixed and worked, and how the cook knew when the bread was done. Have students share their responses with the class.

Light and Healthy Recipe

Recipe Prep Tip Remind students to wash their hands and the table they are using before working with the dough. Point out to students that the recipe indicates that after cutting out the first biscuits, they should push the dough together rather than knead and roll it out again. Repeated kneading and rolling out makes dough tough.



After You Read

Chapter Summary

The two major types of breads are quick breads and yeast breads. A quick bread is leavened by agents that allow speedy baking, such as air, steam, baking soda, and baking powder. A yeast bread is leavened by yeast. These two types of bread are prepared using different methods. Two basic methods are used to make quick bread batter, the muffin method and the biscuit method. The biscuit method has variations that result in different appearances and textures. There are five basic categories of yeast breads. Each kind of yeast bread can be made by following a series of steps.

Content and Academic Vocabulary Review

1. Write each of these content and academic vocabulary words on an index card, and the definitions on separate index cards. Work in pairs or small groups to match each term to its definition.

Content Vocabulary

- quick bread (p. 668)
- muffin method (p. 668)
- biscuit method (p. 669)
- cut in (p. 669)
- rolled biscuit (p. 670)
- knead (p. 670)
- drop biscuit (p. 671)
- yeast bread (p. 671)
- fermentation (p. 671)
- conventional method (p. 672)
- quick-mix method (p. 673)
- score (p. 676)

Academic Vocabulary

- symmetrical (p. 668)
- pliable (p. 675)

Review Key Concepts

2. **Describe** the two methods for making quick breads.
3. **Describe** methods for making yeast breads.

Critical Thinking

4. **Decide** what you would do if you were making bread from scratch. Would you prefer to make quick bread or yeast bread? Give three specific reasons for your answer.
5. **Predict** what would happen if you made muffins by stirring the dry and liquid ingredients together in a bowl until you had a thoroughly wet mix.
6. **Evaluate** the consequences of over-kneading dough for rolled biscuits.
7. **Identify** which type of biscuits you would make if you wanted them to have a slightly rustic, imperfect appearance. Explain your reasoning.
8. **Explain** what you could do if you wanted to make a yeast bread, but wanted to avoid too much kneading.
9. **Analyze** what would happen to dough that was left to rise near a refrigerator that was repeatedly opened and closed.
10. **Describe** three original, creative, and realistic possibilities for shaping yeast dough.

Content and Academic Vocabulary Review

1. Students should write each of the vocabulary words and their definitions on separate index cards, then work together to match each term to its definition.

Review Key Concepts

2. The two methods for making quick breads are the muffin method and the biscuit method. In the muffin method, liquid ingredients are lightly mixed into dry ingredients to create a batter with a slightly coarse yet tender texture. When using the muffin method, it is important not to over mix and to follow these basic steps: measure all ingredients accurately, mix the dry ingredients by sifting, mix the liquid ingredients, make a well in the center of the dry mixer, pour the liquid into the well and fold in the dry ingredients just until they are moistened. In the biscuit method, solid fat is cut into the dry ingredients before lightly mixing in the liquids. The basic steps of the biscuit method are to: measure the ingredients, combine the dry ingredients by sifting, combine the liquid ingredients in a separate bowl, cut the fat into the dry ingredients, make a well in the center of the dry mixture, pour the liquid into the well and mix until the dry ingredients are just moistened.

3. Methods for making yeast breads are the conventional method and the quick-mix method. In the conventional method, the yeast is first dissolved in warm water that is between 105° to 115° to activate its growth. The next steps are as follows: heat the liquid, including the fat and sugar, until the fat melts, and cool the mixture to lukewarm; mix in the dissolved yeast, along with any eggs; mix in enough flour to make a soft or stiff dough. In the quick-mix method, undissolved dry yeast is

combined with part of the flour and the other dry ingredients. The liquid and fat are heated to between 120° and 130°. The liquid and dry ingredients are combined and beaten until well blended. Finally, more flour is added to make the desired kind of dough.

Critical Thinking

4. Answers may vary, but should be supported with three specific reasons. For example, a student may prefer to make yeast bread because the preparation

process is more hands-on, the bread can be formed into creative shapes such as braids and knots, and the final outcome would be more rewarding due to the time and effort taken.

5. The muffins would have a chewy, heavy texture because of over mixing.
6. Over-kneading the biscuit dough will produce biscuits that are too chewy or hard to eat.

7. You should make drop biscuits. This method will result in imperfect, irregular contours because the biscuit dough is simply dropped from a spoon onto a cookie sheet, rather than rolled out and cut into perfect circles.
8. You might make a yeast bread using the quick-mix method, in which dry yeast is combined with dry ingredients, and a standard electric mixer is used to combine ingredients and create a dough. The mixer develops gluten in the dough, which cuts down on kneading time.
9. The refrigerator would repeatedly release cold air near the rising dough every time it was opened and closed. This could cool the dough, and prevent it from rising.
10. Descriptions will vary, but should demonstrate creativity as well as an awareness of what would be realistic when working with dough. Examples include a spiral loaf, a heart-shaped loaf, or a star-shaped loaf.



11. Both popovers and cream puffs have cavities that are appropriate for fillings. Cream puffs are baked on a tray, while popovers are baked in a container, such as a muffin tin.

HEALTHFUL CHOICES

12. Ravi should choose the whole grain bread. Because it is made with flour that is created with the whole wheat grain, including the bran and the endosperm, it contains many beneficial nutrients that the other breads do not. The sweet white bread has sugar added. The sourdough and basic white breads lack the extra nutrition offered by the whole grains.



11. Fun Quick Breads

Popovers and cream puffs are two popular varieties of quick bread that use leavening in different ways to create cavities for fun fillings.



Procedure Follow your teacher's instructions to form teams. Find and prepare a recipe for popovers or cream puffs, as assigned by your teacher. Print or copy the recipe you used, and display it with the baked goods for a class evaluation.

Analysis Sample and evaluate all teams' popovers and/or cream puffs, including your own. List the differences and similarities between the two varieties of bread.

HEALTHFUL CHOICES

12. **At the Bakery** Ravi visits his neighborhood bakery in search of a loaf of freshly made yeast bread. He is looking for bread that will be low in sugar and as rich in nutrients as possible. The bakery has the following options available: basic white, sweet white, sourdough, and whole grain. Which should Ravi choose and why?

TECH Connection

13. **Muffin Ingredients** Imagine you need six dozen assorted muffins for a brunch. Use technology to help you get organized. Under your teacher's supervision, use the Internet to find six appealing and varied muffin recipes. Then use spreadsheet software to create an ingredient list for all of the supplies and ingredients you will need to make each of the six recipes. Then combine all six ingredient lists into one shopping list.

Real-World Skills

Problem-Solving Skills

14. **From Simple to Sweet** Greg assembles the ingredients to make a basic white bread for dinner. When he learns that his dinner guests will bring children, he decides that a sweet white bread would be appealing to the children. Can he use the ingredients he has to make sweet white bread, or must he add additional ingredients? Explain your answer.

Interpersonal and Collaborative Skills

15. **Water Temperature Test** Follow your teacher's instructions to form pairs. One person should pour a water sample and privately take its temperature with a thermometer. The other person should determine if the water is the right temperature to dissolve yeast. Take turns.

Financial Literacy Skills

16. **Mass-Produced or Made with Care** Visit a supermarket and a bakery in your neighborhood. Find out how much a loaf of pre-sliced, packaged, mass-produced sourdough bread costs at the supermarket. Then find out how much the same sized loaf of freshly made sourdough bread costs at the bakery. What is the difference in cost?

TECH Connection

13. Muffin recipes should be varied. Typed grocery lists should include every supply and ingredient cited in the recipes.

Real-World Skills

Problem-Solving Skills

14. Greg can use the ingredients he has on hand for basic white bread to make a sweet white bread. He does need to add to them. He must add butter, eggs, extra sugar, and can also add nuts and fruits.

Interpersonal and Collaborative Skills

15. The right temperature for water to dissolve yeast is between 105° and 115°. Students who determine that water within this temperature range is suitable for dissolving yeast are correct.

Financial Literacy Skills

16. Cost differences will vary, but, in general, the fresh loaf of sourdough bread from the bakery will cost more than the mass-produced sourdough bread from the supermarket.

Academic Skills

Food Science

17. Quick Breads Because these breads have chemical leaveners and do not rely on yeast, they are quick to prepare and bake.

Procedure Mix together $1\frac{3}{4}$ cup flour, $\frac{1}{2}$ cup of sugar, 2 teaspoons baking powder, and $\frac{1}{4}$ teaspoon of salt. Make a well in the center. In a separate bowl, mix together 1 beaten egg, $\frac{3}{4}$ cup of milk, and $\frac{1}{4}$ cup vegetable oil. Then pour into the well of the first bowl. Fold together just until moistened. Spoon batter into paper lined muffin cups until $\frac{3}{4}$ full. Bake at 400° for 20 minutes.

Analysis Which ingredients provide the leavening in this recipe? What would happen if you substituted baking soda for the powder? What if buttermilk were used instead?

NSES B Develop an understanding of chemical reactions.

Mathematics

18. Changing Recipe Yield Beatrice needs to prepare 30 biscuits for a large upcoming brunch. However, the biscuit recipe she is using has a yield of just 12 biscuits. If the biscuit recipe calls for $2\frac{1}{2}$ cups of flour, 1 Tbsp. of baking powder, $\frac{1}{2}$ tsp. of salt, 1 Tbsp. of sugar, $\frac{1}{2}$ cup of butter, $\frac{3}{4}$ cup of milk, and 1 egg, rewrite the recipe to yield 30 biscuits.

Math Concept Multiplying Fractions To multiply fractions, first convert any mixed or whole numbers to improper fractions. Then multiply all numerators to get the new numerator, and multiply the denominators to get the new denominator. Reduce to lowest terms.

Starting Hint You will need to multiply each ingredient amount by the ratio of the new yield to the old yield, written as a fraction in lowest terms.

NCTM Number and Operations Compute fluently and make reasonable estimates.

English Language Arts

19. Bread Song Write a song to educate children about the two major types of bread. Your song may have an original tune or may be set to a familiar tune. Make your song informative, factual, and fun. Include all the steps involved in baking bread in your lyrics. Include four verses and a chorus that is repeated between them.

NCTE 12 Use language to accomplish individual purposes.

STANDARDIZED TEST PRACTICE

TRUE OR FALSE

Read the statement and determine if it is true or false.

20. To punch down dough, thrust your fist into the center of the dough 3 to 5 times.
- a. True
 - b. False

Test-Taking Tip Before deciding whether a statement is true or false, read it carefully, and recall what you have learned from reading the text. Does the statement reflect what you know? Pay close attention to individual words. One word can make the difference between a true statement and a false one.

Academic Skills

Food Science

17. The baking powder provides complete leavening in this recipe. Since there is little acid in the other ingredients, baking soda alone would not provide much leavening. However, if buttermilk were substituted, (an acid), then adding $\frac{1}{4}$ teaspoon of baking soda would provide additional leavening.

Mathematics

18. Beatrice will need to multiply each ingredient amount by $\frac{30}{12}$, or $\frac{5}{2}$. Thus, the new recipe calls for $\frac{5}{2} \times 2\frac{1}{2} = \frac{5}{2} \times \frac{5}{2} = \frac{25}{4} = 6\frac{1}{4}$ cups of flour, $\frac{5}{2} \times 1 = 2\frac{1}{2}$ Tbsp. of baking powder, $\frac{5}{2} \times \frac{1}{2} = \frac{5}{4} = 1\frac{1}{4}$ tsp. of salt, $\frac{5}{2} \times 1 = 2\frac{1}{2}$ Tbsp. of sugar, $\frac{5}{2} \times \frac{1}{2} = 1\frac{1}{4}$ cup of butter, $\frac{5}{2} \times \frac{3}{4} = \frac{15}{8} = 1\frac{7}{8}$ cup of milk, and $\frac{5}{2} \times 1 = 2\frac{1}{2}$ = about 3 eggs.

English Language Arts

19. Songs will vary but should include four verses and a chorus detailing differences in the two major types of bread.

NCLB connects academic correlations to book content.

STANDARDIZED TEST PRACTICE

Answer

20. b. False—thrust your fist into the center of the dough with one quick punch.

TECHNOLOGY Solutions

Use these technology solutions to streamline chapter assessment!



ExamView Assessment Suite

CD allows you to create and print out customized tests or ready-made unit and chapter tests, complete with answer keys.



TeacherWorks Plus is an

electronic lesson planner that provides instant access to complete teacher resources in one convenient package.



Online Learning Center includes resources and activities for students and teachers.