

2023 CACFP VIRTUAL SUMMIT

Book & Bake to Build Math, Science and Literacy Foundations



Sharon Davis, Family & Consumer Sciences Education
Program Director
Home Baking Association
Proud ally of CACFP



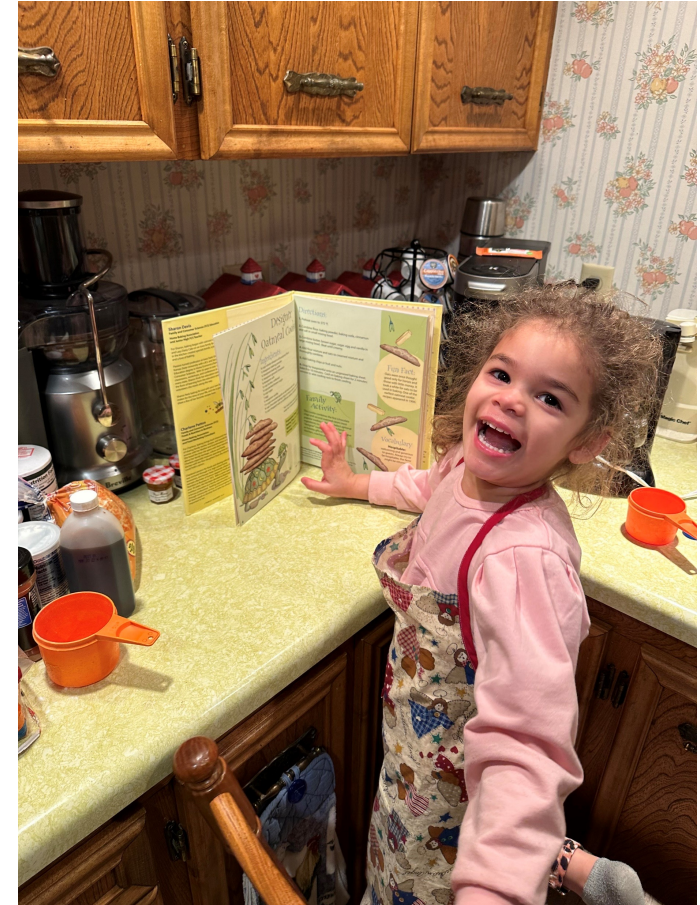
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Why don't we get children in the kitchen to bake ??

What do YOU say as child care providers?

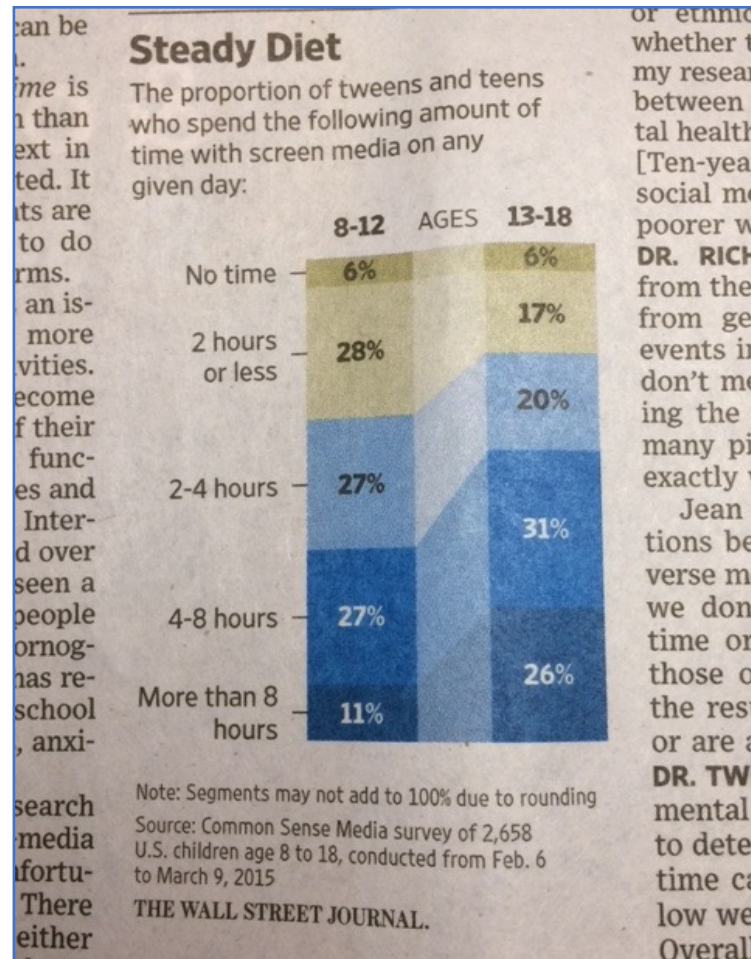
They might get hurt. What will they learn?
It's too messy! There's not enough
time! Who Knows How? We don't have
kitchen stuff.

➔ "Don't hang on to something (practices) because it's best for adults. Do what's good for kids."



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What if all they learn about food is *virtual* or pre-prepared?



Screen time is

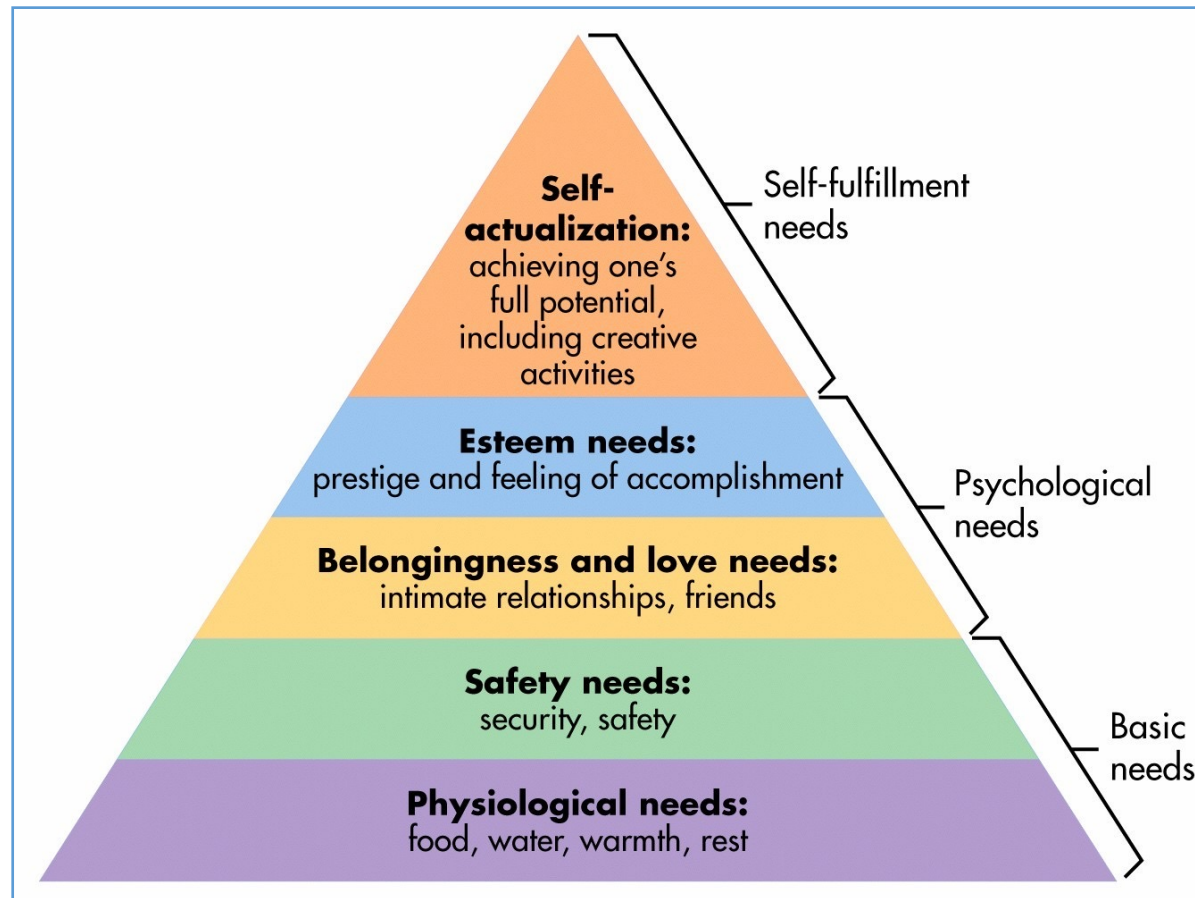
- Not just a tween and teen issue...
- Parents model or encourage screen use instead of real activities at young ages...and on...
- Adults become “unavailable” as teachers, communicators

THE WALL STREET JOURNAL, June 25, 2018

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Horton asks the right question:

“Are you safe, are you warm, are you whole, are you well?”



→ Baking and cooking skills help achieve each level of Maslow's Hierarchy of Needs
→ Achieve levels, beginning at bottom to be “whole.”

Learn more about Maslow's Hierarchy: [Simplypsychology.org](https://www.simplypsychology.org)

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Doctors are eager for food education partners

Many children have never seen their parents produce a meal “speed or scratch”

- Classes to demystify the process
- Emphasize simple, inexpensive, speed scratch
- Children could teach parents, contribute resources, boost self-confidence/esteem
- Diets improve when help prepare meals

+++++

“If children are raised to feel uncomfortable in the kitchen, they will be at a disadvantage for life.”

JOURNAL of the AMERICAN MEDICAL ASSOCIATION. 2010. Lichtenstein, A; Ludwig, D. 303(21):2109

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From Baking with Friends: Recipes, Tips and Fun Facts for Teaching Kids to Bake

The Thrill of Skill

Age-Appropriate Kitchen Tasks

Let older children help teach younger ones – everyone benefits!

2 years old:

Proper hand washing
Wipe table tops
Play with safe utensils
Scrub, wash, tear, snap, break into pieces
Move pre-measured ingredients from one place to another
Add ingredients to a bowl

3 years old: All of the above plus...

Handle dough, begin kneading, simple shaping
Pour cool liquids into mixture
Mix dry ingredients with wire whisk or spoon in extra large bowl
Shake liquids
Spread soft spreads
Place things in trash

4 years old: All of the above plus...

Peel loose skinned oranges; hard cooked eggs
Form round shapes with dough
Mash fruits (bananas) or cooked vegetables
Cut with dull scissors (snip green onions, dried fruits)
Set table

5 to 6 years old: All of the above plus...

Help measure dry ingredients (stir, spoon, level)
Cut with a blunt knife (plastic or tableware)
Use a hand held egg beater or whisk
Crush crackers in a bag with a rolling pin
Sprinkle ingredients on salads, cakes, cookies, casseroles

6 to 8 years old: All of the above plus...

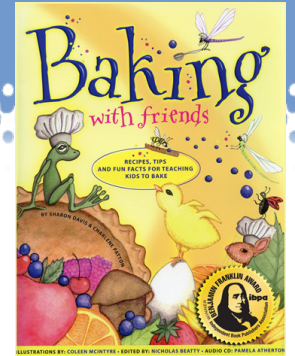
Clean surfaces before and after
Wash fruits and/or vegetables
Gather ingredients and equipment
Grease or spray baking pans
Measure dry ingredients
Measure liquid ingredients
Add measured dry and liquid ingredients into mixing bowl
Learn to crack eggs
Cut fruit, butter or margarine sticks on cutting board (plastic or table knife)
Push buttons on blenders, processors with adult
Knead dough
Preheat oven (adults help load products in hot oven)
Wash dishes, put away ingredients or utensils

9 to 12 years old: All of the above plus...

Learn safe knife skills (chopping, dicing, and cutting)
Handle food equipment safely
Place oven racks and load oven (while oven is cold)
Safe operation of electric equipment (mixer, microwave, bread machine food processor, etc.)
Follow a recipe (measure accurately, prepare a product)
Read ingredient and food labels
Safely handle/store ingredients/finished products
Plan and prepare simple meals, snacks
Clean up (how and what to wash in dishwasher or by hand)

13 years old and up: All of the above plus...

Tasks requiring multiple preparation steps or close timing
Create new flavor combinations, shapes or decoration
Plan and prepare whole menus for meals or entertaining
Make shopping lists and shop for ingredients
Help younger children learn about food and how to prepare
Enjoy cooking with peers



What age can baking begin?

- When everything doesn't automatically go to the mouth.
- Then there is always *some way* for a child to engage.

Download in English or Spanish
Online, HomeBaking.org

What tools are best for young bakers?

- Six cup standard muffin tins; liners
- Use parchment pan liners
- Large sturdy spoons (bamboo, plastic)
- Bowl scraper
- Large handled measuring cups
- Digital scale
- Cooling racks

Video

https://youtu.be/pl80-7z9_iM

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What could they bake with you?

Whole grain flour and meal, fruit and veggie enhanced, savory and not-too-sweet

- Pancakes, waffles, crepes
- Muffins, biscuits, crackers
- Rolls, buns, braids, breadsticks
- Flat breads- focaccia, tortillas, naan, chapati
- Pizza
- Soft pretzels
- Gifts- Apple Tarts, Granola,



Customizeable Fruit and Veggie
Quick Breads-

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Seeing may be believing with parents.

With the children, as they do tasks...

- Complete skills and chart
- Confirm baking food safety—no licking/eating raw ingredients or batter!
- Bake until done- take temperatures
- Shows how children can support family meals by “doing it yourself” and saving \$\$\$

Download at HomeBaking.org
LEARN
Baking with Friends

From Baking with Friends: Recipes, Tips and Fun Facts for Teaching Kids to Bake

Baking Skills Check List

What can you do? Check the skills that you already have and get ready to explore and enjoy the wonder of food and the delicious results!

Getting Ready

- ☐ Read Recipe Thoroughly
- ☐ Ingredients Available
- ☐ Equipment Available
- ☐ Follow Directions

Clean-Up

- ☐ Food Safety
- ☐ Clean-up

Measuring Basics

- ☐ Kitchen Measurements
- ☐ Teaspoons
- ☐ Tablespoons
- ☐ Cups
- ☐ Scales, U.S./English/Metric
- ☐ Dry Ingredients
- ☐ Liquid Ingredients
- ☐ Brown Sugar
- ☐ Shortening and Butter

Nutrition Information

- ☐ Net Weight
- ☐ Food Label
- ☐ Ingredient Label

Mixing Methods

- ☐ Muffin Method
- ☐ Biscuit Method
- ☐ Drop Cookie Method
- ☐ Rolled Cookie Method
- ☐ Shaped Cookie Method
- ☐ Cake Method
- ☐ Rapid Mix Yeast Dough Method
- ☐ Straight Dough Method
- ☐ Cool-Rise Method

Techniques/Terms

- ☐ Shell an egg
- ☐ Separate an egg
- ☐ Sift, blend, whisk
- ☐ Cream
- ☐ Cut-in
- ☐ Knead
- ☐ Ferment, raise, rest, punch
- ☐ Fold-in
- ☐ Peel
- ☐ Slice, dice, grate
- ☐ Roll out
- ☐ Divide dough
- ☐ Simmer
- ☐ Boil

Equipment

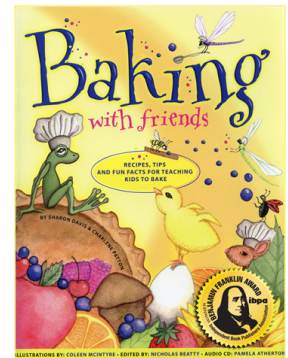
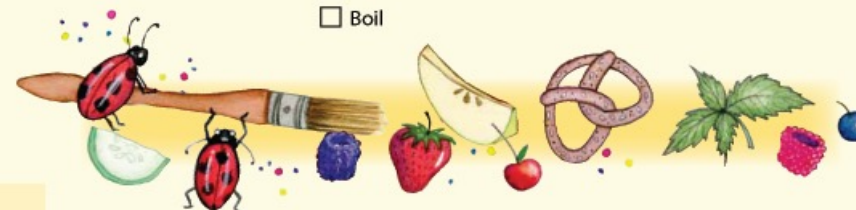
- ☐ Oven Use
- ☐ Microwave Use
- ☐ Small Appliances
- ☐ Hand Mixer
- ☐ Stand Mixer
- ☐ Food Processor
- ☐ Bread Machine
- ☐ Skillet
- ☐ Griddle; waffle iron

Foods & Nutrition Resources

Meal Planning

- ☐ Menus
- ☐ Setting a Table
- ☐ Dining Etiquette

Other:



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Events to make Home a Partner

Families currently rank lowest:

- Shared activities
- Connecting to community

Search Institute

The American Family Assets

Study. 2012. search-institute.org

Parents can learn how to cook
and bake with child—both learn
Important knowledge and skills!!



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What actually gauges student potential?

USA Today, 10/2/2013: Tracking the Nation's Conversation

“The No. 1 determining factor that correlates to how well a child does in school is ***how active both parents are in their child's education process, from early reading, home work* and help studying.*** If the parents don't get involved and put a focus on education at an early age, many kids take that as a sign its just that important. “

John Rambo [facebook.com/usatodayopinion](https://www.facebook.com/usatodayopinion)

*Sharon's note: including “at home” (work around the home) that teaches so many small and large motor skills, math, science, creative and critical thinking, sequencing, time management, true self esteem for contributions to family...

Baking may engage the father factor

1. Respect mom- help with food preps
2. Spend time w/ children
3. Listen 1st
4. Discipline w/love
5. Be a Role Model
6. Be a teacher
7. Eat together as a family
8. Read to your children
9. Show affection
10. Realize: a father's job is never done!

Source:

<http://www.fatherhood.org>

[How to have conversations?](#)
[The FamilyDinnerProject.org](#)

.... Activities

Crunchy, Nutty Muffins

By Sandra K. Nisenberg, M.S., R.D. • Art by Chuck Dillon

You Need

Muffins

- ½ cup butter
- 1 egg
- 1 cup milk
- 1 teaspoon vanilla
- 2 cups flour
- ½ cup sugar
- 2 teaspoons baking powder
- ½ teaspoon salt
- 1 cup chopped walnuts

Topping

- 1 tablespoon butter
- 2 tablespoons flour
- 1 tablespoon brown sugar
- ¼ teaspoon cinnamon

Before You Begin

Put 12 paper baking cups into a muffin tin.

Adult: Preheat the oven to 375°F. Melt the ½ cup and 1 tablespoon of butter separately.

Have fun baking muffins with Mom or Dad this month.



1. Crack the egg into a small bowl. Use a whisk to beat the egg.
2. Put the ½ cup of melted butter, the milk, and the vanilla into the small bowl. Stir.
3. Put the flour, sugar, baking powder, salt, and walnuts into a large bowl.
4. Pour the wet ingredients into the large bowl. Gently stir just until mixed. The batter will be lumpy.
5. Mix the topping ingredients in a small bowl.
6. Fill the muffin cups ¾ full. Sprinkle 1 teaspoon of the topping over each muffin.
7. **Adult:** Bake for 20–25 minutes until golden brown. Cool in the tin for 10 minutes.

Photo by Guy Call Associates, Inc.
May 2014 Highlights High Five® 35

Source *High Five! Magazine* Highlights.com

What's Learned? Foundational **Early** Learning Blocks

- **Oral expression** (listen, use language, ask questions)
- **Vocabulary** (single word labels, follow one-step directions, take turns w/adults/peers, vary experiences)
- **Letter Knowledge and Early Word Recognition** (read together simple, high frequency words)
- **Print and Book Awareness** (related story book)
- **Number/Number Sense** (count objects, one-to-one correspondence, “how many,” more, less, bigger, smaller)
- **Measurement** (Name correct name for tools to take temperature, weight, length, capacity and tell time; comparison terms for hot and cold)
- **Geometry** (position of objects in relation to others—beside, under, below, bottom)
- **Scientific Investigation, Reasoning, Logic** (Identify properties of objects by direct observation; describe using pictures and words; five senses; question) Matter (Identify colors, shapes, textures; describe position)
- **Civics/Citizenship** (Cooperate with others in joint activity; share thoughts/opinions; demonstrate responsible behaviors in caring for classroom materials; identify needs of other people by helping

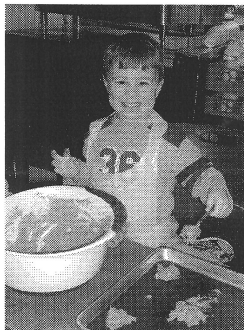


Baking Building Blocks

Fluff, Scoop, Level...Fluff, Scoop, Level...

A sample of some of the
baking skills we work on in class

- * fluffing, scooping, and leveling flour
- * cracking eggs
- * cutting butter into dry ingredients
- * measuring liquid and dry ingredients



- * portioning out dough into similar size rounds so the cookies bake evenly
- * rolling dough into balls and flattening or making criss-cross marks with forks
- * using the wafting technique to smell the batter/dough/ingredients

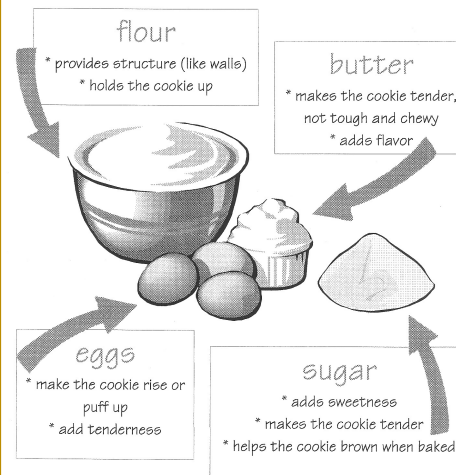


- * rolling triangles into crescent shapes
- * folding in ingredients



Baked Goods - Basic Ingredients

What do you need?



Basic Human Needs

Circle the pictures that show the 4 basic human needs and then color them.



Sequencing

> Cut apart the pictures. See if you can put them in order and tell how to bake Toffee Bits Triangles.



Cool completely and cut into triangles.



Bake at 350 degrees for 18-20 minutes.



Sprinkle chocolate chips over top of crust and spread evenly. Add remaining toffee bits.



Press dough into pan.



Mix butter, brown sugar, vanilla, and egg yolk in a bowl. Add flour and toffee bits.









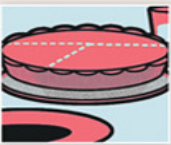
BakeWorks
Lesson at
HomeBaking.org

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A Worksheet for Math-Phobic Parents.

By Sue Shellenbarger, *The Wall Street Journal*. 8/29/12.

REAL-LIFE MATH | Experts suggest these games—no pointy pencils required.

PRESCHOOLERS	ELEMENTARY SCHOOL
 <p>Build a towers of blocks side-by-side and invite your child to make hers look like yours.</p>	 <p>Make a game of finding and naming geometric shapes around the house, asking, "How many triangles can you find?"</p>
 <p>Point to three peas and say, "How many peas do you see? 1-2-3?"</p>	 <p>Use fractions to divide recipe ingredients while helping cook in the kitchen, asking, "How many one-quarter cups make a cup?"</p>
 <p>Give a child Wiffle balls and a muffin tin or egg carton and encourage them to place one ball in each container.</p>	 <p>Bank their allowance weekly, track balances and figure out how many more weeks are needed before they can buy a toy they want.</p>
 <p>Have your child draw a number line on the sidewalk and answer questions by hopping on the number, such as, "Hop to 4," and then, "Hop to the number that is 1 more."</p>	 <p>Figure out how long a trip to Grandma's house will take by plane or by car.</p>
	 <p>Cut pies, pizza, apples or other foods into halves, fourths, fifths and so on; ask, "Which is bigger?"</p>

Art, Jason Schneider, August 29, 2012.

"Baking in the kitchen, Ms. Fiona Cameron explains fractions while having each of her children crack half the eggs.

Filling muffin cups becomes a subtraction problem: "If we fill eight muffin cups and there are 12 in all, how many more do we have to fill?"

Thanks to this "stealth math" approach, her kids are having fun solving problems," she says."

A version appeared Aug. 29, 2012, page D1, U.S. edition, *The Wall Street Journal*, *A Worksheet for Math-Phobic Parents*.

Mise en Place (Meez-On-Plahss)

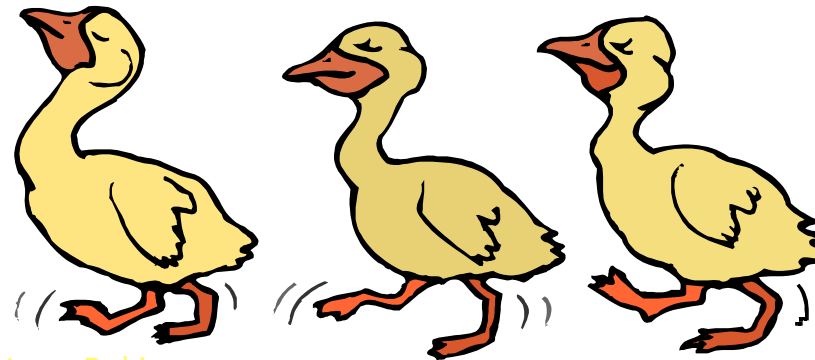


Planning & Organizing for Prep

Read the recipe

Assemble ingredients, equipment

Measure, chop, prep pans, heat oven



Connie Nieman, *Baking Builds STEAM* Workshop, 5/2106, HomeBaking.org

Scoop Spoon Scale



Subject: Baking Measurements

Activity: Scoop, Spoon, Scale. Compare and evaluate dry measuring methods for accuracy.

Resources required: One 5-lb bag flour—half left in bag, half in large bowl
Stirring spoon; straight-edged scraper; electronic scale; mixing bowl
Two, 1-cup dry measuring cups; one, 1-cup liquid measuring cup

Introduction: To get the same great product each time, how you measure matters. Compare the results to discover how much it matters.

Directions: Have three volunteers each measure 1 cup the same flour, each using a different method. Weigh each cup of flour in a zero-balanced bowl on the scale.

Volunteer #1: Large bowl, spoon: Stir flour with spoon to loosen; lightly spoon flour into the 1-cup dry measuring cup until heaping full. Level off the flour using straight edge.

Volunteer #2: Scoop flour out of bag with 1-cup dry measuring cup; shake to “level”

Volunteer #3: Large bowl: Scoop flour with 1-cup liquid measuring cup, shake to level

Evaluate: What are the differences in weights between the three methods?
What method do test kitchens and professional bakers use?
(A: Method #1 and/or scales--1 cup all-purpose or whole wheat flour = 4.25 oz)

Extra minute? How much extra flour will you have if you use the method to measure 3 cups flour for bread?
How will the extra flour impact the recipe's result? (A: heavy, dry, crumbly)

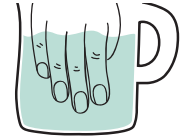
View “How to Measure Flour”
1-minute video at [HomeBaking.org](https://homebaking.org)
Glossary, Flour.



MINUTE ACTIVITIES

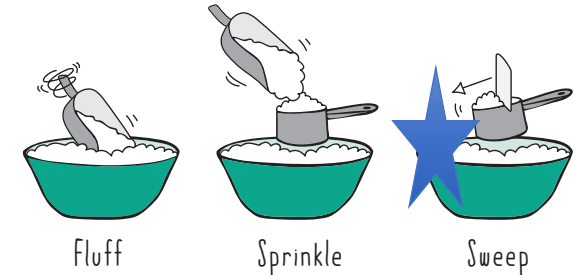
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If the water is too hot, it will kill the yeast. Test the water temperature; it should feel comfortably warm.



How do you measure up?

Pour the flour from the bag into a medium-sized bowl.



ram
erm
rm



“Active Lifestyles” include cooking and baking.” Do the math.

30 days in a month, 365 in a year
X 100 calories extra burn per day when you cook
36,500 extra calories or 10 pounds a year

The “I don’t cook” attitude adds 10 lbs. a year.
Make cooking **a** part of an active lifestyle.
Also, can control portion size...

*Cooking Light magazine: Calories burned every 30-40 minutes of cooking, serving, cleaning up = 75 to 125

*3,500 calories = 1 pound added weight

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“I don’t cook” costs family of four \$ 5,760/ year minimum
By graduation (18 years) = \$ 103,680

1@ skipped breakfast, large drink + ? = $\$4.50 \times 150 \times 4 = \$ 2,700$

DIY Pizza saves \$5+ per 14-inch pizza X 300 pizzas = \$ 1,500

Eat out 1X weekly @\$30.00 > DIY at home X 52 weeks = \$1,560

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Critical Thinking: *How much income is lost in drive through lanes buying fast food just because Americans don’t or can’t cook?*

What could a family do with \$103,680 “found” money from their hard earned paychecks? How would children feel if they were part of the solution!

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FCS Take Lead in school, community: **DIY Portable Kitchen Crate Blueprint**

Three, large (68Qt) leader crates with lids contain

1) Clean: 3 dishpans, dish soap, bleach, cloths

Towels, aprons, hair ties, trash bags

Collapsible cooler and collander; 2 cutting mats

2) Measure and Mix: 1 @ nested mixing bowls w/lids

Dry measuring cups/spoons; 2-cup liquid measure; 2 qt pitcher

Large stirring spoon, whisk, scrapers; bamboo spoon

Pizza wheel, dough scraper, kitchen scissors; turner

Can opener; paring, utility and chef knives; 1-in dowel rolling pin

Rule or tape measure

Electronic scale; food & oven thermo meters

Drop cord; electric griddle or skillet

- Visuals: HomeBaking.org guide cards; MyPlate etc

3) Bake, Cool, Wrap: 2 @ sheet, square, pie & muffin pans, wire cool racks; Oven gloves (see right, Chef'sPlanet.com) or mitts

Source: Sharon Davis, HomeBaking.org

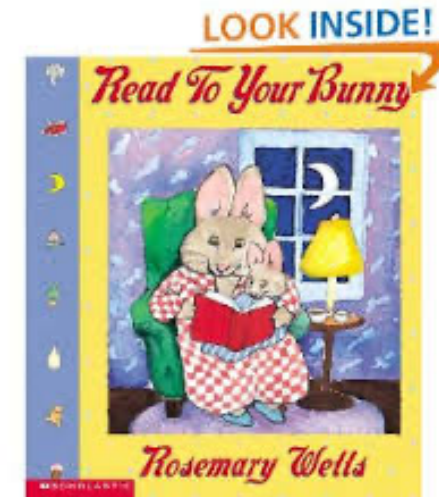


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PLUS Small Pantry Crate with Books

Food items kept separate to avoid spills in tool crate

- Leavenings—soda, baking powder, yeast
- Substitutes: flaxmeal (for eggs); vinegar
- Dry milk, spices, herbs, flavorings
- Sugars, salt, flours, corn/flaxmeal
- Cooking oil
- Food storage bags, plastic wrap, waxed paper
- Markers, labels



Favorite letter, number,
Farm, food books!!
Read, read, read
Read Recipes together!!

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Book AND Bake

People who read succeed.
Less than 50% of parents read to or
with their children.



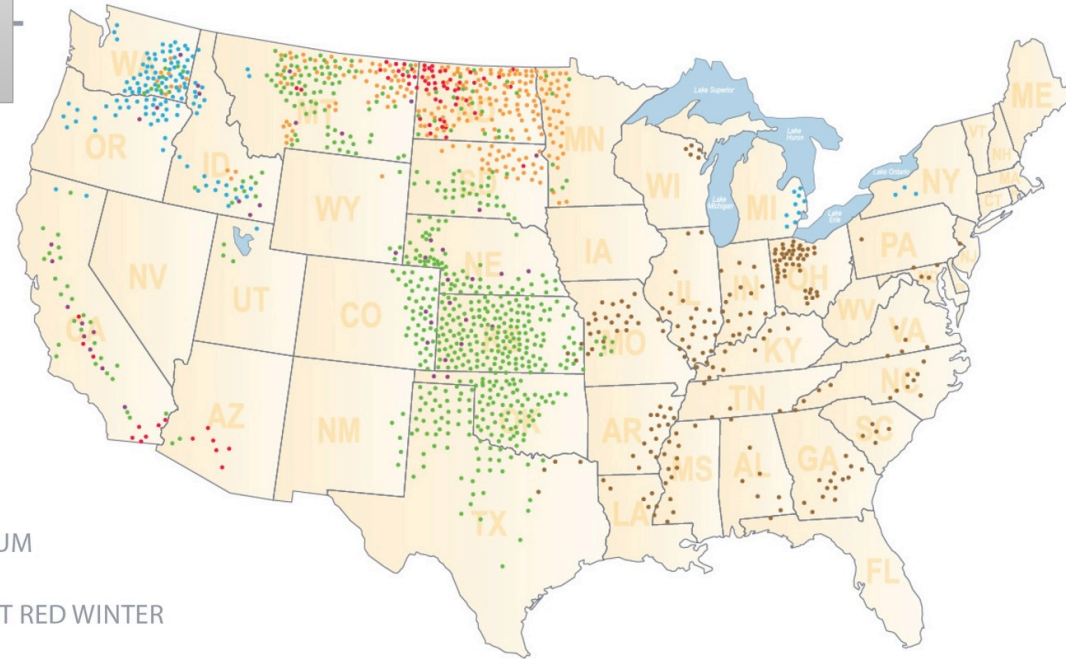
- No screen time under 2 years; 1 to 2 hours or less after.
- Between 3 and 7, most important mental growth: imagination
- Requires active play and live conversation
- Turn off phones, TV, screens
- Every day, at least twenty minutes, read aloud at all ages!
- Builds vocabulary, fluency
- Discuss, invite questions; write
- Highlight alphabet, match sounds, rhymes, alliteration
- Connected explorations, activities

Flour is Not Just Flour

THE SIX CLASSES OF U.S. WHEAT AND
THE FOOD PRODUCTS MADE FROM THEM



- SOFT WHITE
- HARD WHITE
- DURUM
- HARD RED WINTER
- HARD RED SPRING
- SOFT RED WINTER



● HARD RED WINTER

Versatile, with excellent milling and baking characteristics for pan bread, HRW is also a choice wheat for Asian noodles, hard rolls, flat breads, general purpose flour and cereal.

● HARD RED SPRING

The aristocrat of wheat when it comes to “designer” wheat foods like hearth breads, rolls, croissants, bagels, and pizza crust, HRS is also a valued improver in flour blends.

● SOFT RED WINTER

Versatile weak-gluten wheat with excellent milling and baking characteristics for cookies, crackers, pretzels, pastries and flat breads.

● SOFT WHITE

A low moisture wheat with high extraction rates, providing a whiter product for exquisite cakes, pastries and Asian-style noodles, SW is also ideally suited to Middle Eastern flat breads.

● HARD WHITE

The newest class of U.S. wheat, HW receives enthusiastic reviews when used for Asian noodles, whole wheat or high extraction applications, pan breads and flat breads.

● DURUM

The hardest of all wheat, durum has a rich amber color and high gluten content, ideal for pasta, couscous and some Mediterranean breads.

wheat drawing, copyright (c) Grolier Interactive Inc.
wheat map courtesy of the National Association of Wheat Growers

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Ingredient Science: The Scoop on Gluten

Wheat Growers Corner





Flour 101

If you want to flex your baking muscles, think flour -- there's a lot more than "all-purpose" out there. Many of the flours listed below can be found in the baking aisle of your favorite grocery store. With fall just around the corner -- the harbinger of bake sales and holiday entertaining -- it's time to start harnessing the power of flour for your next baking project!

Keep in mind that the harder the wheat, the higher the protein content in the flour. Soft, low protein wheats are used for cakes, pastries, cookies, and crackers, while hard, high protein wheats make excellent breads.

The finely ground endosperm of the wheat kernel.

All-purpose flour

White flour milled from hard wheats or a blend of hard and soft wheats. It gives the best results for a variety of products, including some yeast breads, quick breads, cakes, cookies, and pastries. All-purpose flour is usually enriched and different brands will vary in performance. Protein content varies from 8-11 percent.

Bread flour

White flour that is a blend of hard, high protein wheats and has greater gluten strength and protein content than all-purpose flour. Bread flour is milled primarily for commercial bakers, but is available at most grocery stores. Protein varies from 12-14 percent.

Cake flour

Fine-textured, silky flour milled from soft wheats with low protein content. It is used to make cakes, cookies, crackers, quick breads and some types of pastry. Cake flour has a greater percentage of starch and less protein, which keeps cakes and pastries tender and delicate. Protein varies from 7-9 percent.

Self-rising flour

Also referred to as phosphate flour, a convenience product made by adding salt and leavening to all-purpose flour. It is commonly used in biscuits and quick breads, but is not recommended for yeast breads. One cup of self-rising flour contains 1½ teaspoons baking powder and ½ teaspoon salt. Self-rising can be substituted for all-purpose flour by reducing salt and baking powder according to the proportions.

Has properties intermediate between those of all-purpose and cake flours. It is usually milled from soft wheat for pastry-making, but can be used for cookies, cakes, crackers and similar products. It differs from hard wheat flour in that it has a finer texture and lighter consistency. Protein varies from 8-9 percent.

Whole wheat flour

This flour is milled from the entire kernel of hard red wheat either by grinding the whole-wheat kernel or recombining the white flour, germ and bran that have been separated during milling.

The presence of bran reduces gluten development, therefore, items baked with whole wheat flour tend to be heavier and more dense than those made from white flour. The insoluble fiber content is higher than in white flours.

White whole wheat flour

This flour is milled exactly like whole wheat flour and is nutritionally equivalent to whole wheat flour as well. The only difference is that whole white wheat flour is made with a white, not red wheat variety. The bran of white wheat is lighter in color and has a milder flavor than red wheat and therefore the flour has these properties as well.

Gluten flour

Usually milled from spring wheat and has a high protein (40-45 percent), low-starch content. It is mixed with other non-wheat or low-protein wheat flours to produce a stronger dough structure. Gluten flour improves baking quality and produces a high-protein bread.

WheatFoods.org



Milling Science: View how wheat is milled into flour. Education tab, <http://www.namamillers.org> ; Truth about Wheat. www.okwheat.org

Read book AND recipe together, aloud.

Add a book for...

- Social skills/empathy

The Littlest Pumpkin

By R.A. Herman

- Rhyme, symmetry, food names

The Runaway Pumpkin.

By Kevin Lewis

- Math sequence, shapes, whole numbers, fractions

Baking with Friends Pumpkin Pancakes recipe.

- “Farm to Table”, baking, & nutrition sciences

Seed, Sprout, Pumpkin Pie.

BY Jill Esbaum

Celebrate Wheat!.

By Dan Yunk

Pumpkin Pancakes

Ingredients:

- 1 cup all-purpose or wholegrain baking mix
- $\frac{3}{4}$ cup low fat milk
- $\frac{1}{4}$ cup quick oatmeal or whole wheat flour or cornmeal or flax meal
- $\frac{1}{4}$ cup cooked or canned pumpkin
- 1 egg, lightly beaten
- 1 tablespoon packed dark brown sugar
- 1 tablespoon melted butter
- $\frac{1}{4}$ teaspoon ground cinnamon
- $\frac{1}{8}$ teaspoon ground nutmeg
- $\frac{1}{8}$ teaspoon ground ginger
- Vegetable oil

Preparation Time: 10 minutes
Baking Time: 2-3 minutes per side
Makes: 15 pancakes
Serving: 1 pancake

Directions:

1. Preheat griddle or skillet until hot (400 °F).
2. Combine dry ingredients in medium mixing bowl.
3. Combine milk, pumpkin, egg and butter in separate bowl. Add to dry ingredients and mix just until blended. Do not over mix.
4. Brush griddle or skillet with vegetable oil. Griddle or skillet is ready for pancakes when a drop of water sprinkled on the hot surface sizzles.
5. Ladle or pour $\frac{1}{4}$ cup batter for each pancake onto the griddle or skillet. Space batter 2 inches apart for easier flipping.
6. Bake until tops are bubbly and edges are dry. Turn pancakes only once; bake until golden brown. Serve with fruit sauce, applesauce, honey, pumpkin butter or syrup.

Family Activity:

Make a Pumpkin Butter to spread on the pancakes. In a large saucepan, combine one (29 ounce) can pumpkin, $\frac{1}{4}$ cup apple juice, $1\frac{1}{2}$ cups sugar, 2 teaspoons ground cinnamon, $\frac{3}{4}$ teaspoon EACH ground ginger and ground nutmeg and $\frac{1}{2}$ teaspoon ground cloves. Slowly bring to boil and simmer while stirring, about 30 minutes until thick. Serve warm or refrigerate when cooled.

Nutrition Facts (1 serving/31g)
Calories: 58. Protein: 2g. Carbohydrates: 9g. Dietary Fiber: 1g. Fat: 2g. Mono Fat: 1g. Cholesterol: 15mg. Calcium: 19mg. Potassium: 18mg. Sodium: 11mg

Fun Fact:
The first recipe for a pancake appeared in an English cookbook back in the fifteenth century.

Vocabulary:
Self-rising flour: a blend of all-purpose flour, baking powder and salt.

From *Baking with Friends*. HomeBaking.org—
Spanish translation available

Simply Delicious! Corn Cakes



2 cups self-rising cornmeal mix

1 ½ to 1 ¾ cups low fat milk or buttermilk (more to thin if needed)

¼ cup fresh corn or other yummy (chopped sweet peppers or favorite fruit)

1 egg or egg substitute

2 Tablespoons oil or melted butter

1. Mix milk, egg and oil together. Pour into cornmeal mix. Stir to moisten all ingredients.
2. Oil and preheat griddle to 400 degrees F. Get plates ready 😊
3. Scoop, edges brown, turn once. Serve with homemade syrup (karosyrup.com). 😊



Oatmeal Whole Wheat Fruit Bars

Prep: 15 min Bake: 35-40 min Makes 12,(1.8 oz/52g) servings

Original Whole Wheat Jam Bar Ingredients

- 1 cup (120g) whole wheat flour
- ½ cup (110g) packed brown sugar
- ½ cup (4 oz/113g) butter, softened
- 1 cup (85g) rolled oats
- ¼ teaspoon (1.15g) baking soda
- 1/8 teaspoon (0.75g) salt

Filling:

- Scant 2/3 cup (200g) seedless raspberry or favorite jam

Nutrition Facts	
Serving Size (53g)	
Servings Per Container	
Amount Per Serving	
Calories 200	Calories from Fat 70
% Daily Value*	
Total Fat 8g	12%
Saturated Fat 5g	25%
Trans Fat 0g	
Cholesterol 20mg	7%
Sodium 55mg	2%
Total Carbohydrate 32g	11%
Dietary Fiber 2g	8%
Sugars 20g	
Protein 3g	
Vitamin A 6%	Vitamin C 0%
Calcium 2%	Iron 6%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Saturated Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300 mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

Makes one, 8X8-in pan
(Serves 12)

Sources: TexasWheat.org

Smart Snack adapted ingredients italicized

- 1 cup (120g) whole wheat flour
- ½ cup (110g) packed brown sugar
- 1 cup (85g) rolled oats
- 1/4 cup (55g) *vegetable oil*
- 2 Tablespoons (1 oz/28g) *butter*
- 1 Tablespoon (15g) *1% milk*
- ¼ teaspoons (1.15g) baking soda
- 1/8 teaspoon (0.75g) salt

Filling:

- Scant 2/3 cup (200g) J.M Smucker *Simply 100% Fruit spread*

Each bar provides

17g whole grain



Nutrition Facts	
Serving Size (44g)	
Servings Per Container	
Amount Per Serving	
Calories 160	Calories from Fat 50
% Daily Value*	
Total Fat 6g	9%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Cholesterol 5mg	2%
Sodium 50mg	2%
Total Carbohydrate 26g	9%
Dietary Fiber 2g	8%
Sugars 14g	
Protein 2g	
Vitamin A 2%	Vitamin C 0%
Calcium 2%	Iron 6%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Saturated Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300 mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

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What skills are gained by dough sculpting?

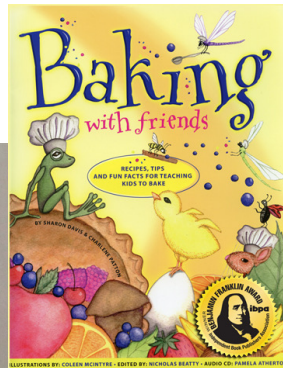


Baking Food Safety: Play Clay is a cooked dough, NOT raw flour.

Corn Starch Play Clay
Video/recipe

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What is tactile, builds motor skills, and goes with dinner😊



Bread!

A staple, nutritious food...



Bread Sticks

Ingredients:

- 1½ cups warm water (95°F)
- 1 (¼ ounce) package or 2¼ teaspoons active dry yeast
- ½ cup cornmeal
- 4 to 4½ cups all-purpose flour (May be part whole wheat)
- 2 tablespoons vegetable oil
- 1½ teaspoons salt

Optional: Egg wash and cheese, sesame seeds or coarse salt.

Preparation Time: 40 to 50 minutes
Baking Time: 3 to 8 minutes
Makes: 16 bread sticks
Serving: 1 bread stick

Directions:

1. Combine water, yeast, cornmeal and 2 cups of flour in large mixing bowl. Stir about 2 minutes. Cover; let stand 15 to 30 minutes.
2. Add vegetable oil, salt and 1 cup additional flour. Mix until well blended.
3. Add enough of the remaining flour until dough forms a rough ball and pulls away from sides of the bowl.
4. Place dough on lightly floured surface; knead about 5 minutes until smooth and elastic. Shape into a smooth round ball; cover; let dough rest 20 minutes. Oil place in greased bowl, cover and refrigerate until ready for shaping, up to 2 days. (Punch dough and reshape into dough ball each time it doubles.)
5. Divide dough in half; shape each half into 8-inch long log. Cut each log of dough into 8 pieces. Roll each piece of dough into "snakes". Thicker pieces of dough will make soft sticks and very thin pieces of dough for "grissini" like sticks.
6. Lay sticks about 1-inch apart on parchment-lined baking sheet sprinkled with additional cornmeal if desired. Cover; let dough sticks rise until double about 20 minutes.
7. Preheat oven to 450°F. Brush sticks with 1 tablespoon water beaten with 1 egg white; sprinkle with cheese or sesame seeds or coarse salt as desired.
8. Bake 3 to 8 minutes or until browned. (Baking time will depend on thickness.) Remove from pan to cooling racks.

Option: Omit oil and add 1 cup grated, favorite cheese (Parmesan, Cheddar) to dough.

Family Activity:

Young family members will enjoy shaping "snakes" of bread dough for bread sticks, and brushing (painting) the egg wash on unbaked breads, pastries or other baked goods just before baking to provide a rich color or gloss to the crust.

Nutrition Facts (1 serving/42g)
Calories 158; Protein 4g; Carbohydrate 30g; Dietary Fiber 1g; Fat 2g; Mono Fat 1g; Poly Fat 1g; Calcium 6mg; Potassium 60mg; Sodium 224mg

Fun Fact:

Wheat and its early relatives were first grown in the Tigris and Euphrates River basin, near Iraq, and became a staple grain more than 10,000 years ago. Egyptians are credited with discovering yeast-leavened breads.

Vocabulary:

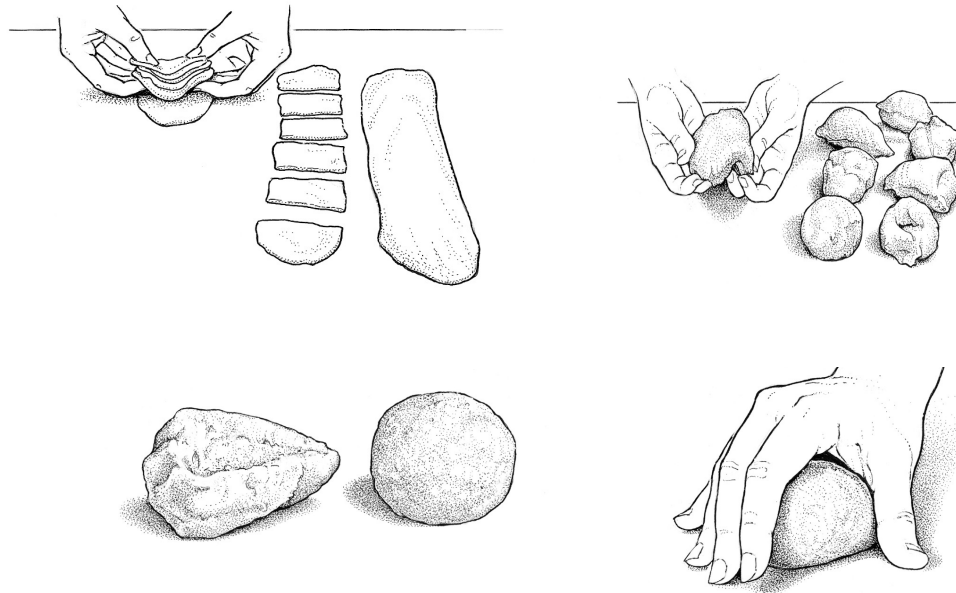
Egg wash: A thoroughly combined mixture of 1 whole egg, egg yolk, or egg white mixed with 1 tablespoon cold water or milk.

16 whole grain soft breadsticks cost \$ 1.34 to make; \$4.00+ for 2 refrigerated packages;

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See the math in sculpting.

Divide dough in half,
each half into six equal
pieces.



Place rolls on pan
2 inches apart

X X X X
X X X X
X X X X

X X X X
X X X X
X X X X

TIP: Write names on
parchment by your
dough art.

Illustration Source: *King Arthur Whole Grain Baking*.
The Countryman Press, 2006. www.kingarthurfLOUR.com

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Build their STEAM!

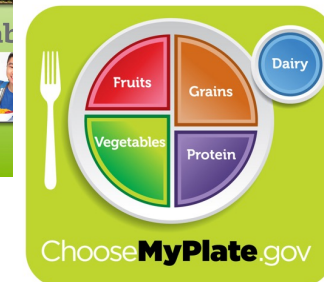
Baking Ingredients

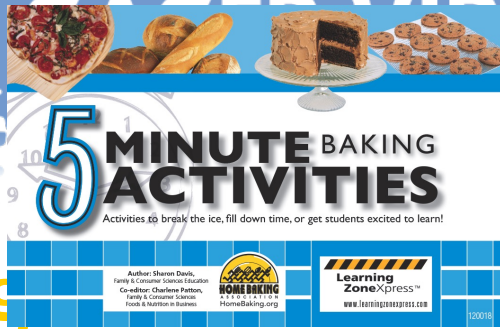
Baking Temperatures

Baking Measurements

Baking Tools/Equipment

Baking Benefits

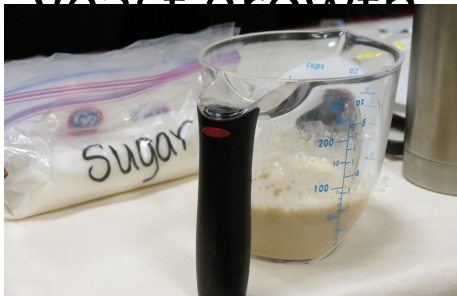




Baking

Q: What does the Yeast Beast like to eat?!

- $\frac{1}{4}$ cup water, 90° F.
- $\frac{1}{4}$ tsp. yeast (control type yeast)
- 3 or more cups—1 tsp. sweetener, carb, sugar, honey per each cup
→ 1 variable/cup
- Time observations at 5 min, 10 min. Measure yeast growth



Let kids get in the action...

1. Ask a Question
2. Research
3. Construct a Hypothesis (What do they think will happen?)
4. Test Your Hypothesis by Doing an Experiment
5. Analyze Your Data and Draw a Conclusion (Measure, Observe, Talk)
6. Communicate Your Results

• Source: www.sciencebuddies.org

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- Over 40 million acres of wheat are grown in the United States.
- Flour is made from raw grain that is grown and harvested in nature and exposed to the elements.



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- Wheat flour has a very strong food safety track record, however...
- E. coli and other naturally occurring pathogens present in nature and in fields, crops.



Flour is not ready-to-eat

- Traditional milling does not include a process to eliminate the presence of pathogens such as e coli and salmonella.
- Peer reviewed studies have reported pathogen prevalence in wheat as 0.1 to 3% at low MPN levels. (*Myoda et al., 2019*).



DON'T EAT BATTER THAT CONTAINS RAW EGGS OR RAW FLOUR! Raw eggs and raw flour may contain harmful bacteria that could make you or your family sick.



Common Misconceptions

- Growing misconception that microwaving makes flour safe to eat uncooked.
- But: microwave heating can be uneven, especially for low-moisture foods like flour.
- Not hot enough to kill all bacteria.

Fact: flour is a raw ingredient.

Note: Commercially sold products that contain “raw dough” should use flours that have been commercially treated to reduce pathogens.

INSIDER

REVIEWS



[HOME](#) > [KITCHEN](#)

How to make edible cookie dough that's safe to eat raw

By Taylor Mead Sep 8, 2021, 1:04 PM



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Key Messages

Raw Dough's a Raw Deal and Could Make You Sick

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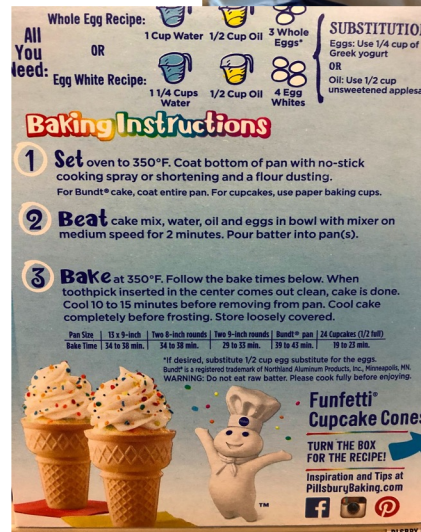
✉ Email

FDA



5 Important Things to Know About Flour

1. Flours most commonly used in home baking and cooking are made directly from raw grains.
2. Processing raw grains into flour does not kill harmful bacteria.
3. Many foods made with flour also contain raw eggs, which may contain harmful bacteria.
4. Cooking is the only way to be sure that foods made with flour and raw eggs are safe.
5. **Never eat or taste raw flour, dough, or batter.**



“Do not eat raw batter”



saferecipeguide.or



SAY NO TO RAW DOUGH



www.fightbac.org/kids

Baker's Bottom Line for Food Safety: Raw flour, baking mixes, batter and dough are not ready-to-eat. Flour, as well as eggs, must be thoroughly cooked or baked before eating to prevent illness from bacteria in the flour. Wash hands, utensils, and surfaces after mixing and handling batter or dough.



HomeBaking.org

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North American Millers' Association

**DID YOU KNOW FLOUR IS A RAW INGREDIENT?
IT'S TRUE.**
WHEAT COMES FROM THE FARM, IS MINIMALLY PROCESSED,
THEN PACKAGED FOR USE



SO YOU SHOULD NEVER EAT RAW FLOUR!

HEALTH & SAFETY TIPS:
DON'T EAT RAW DOUGH OR BATTER



**WASH HANDS, BAKING TOOLS AND
SURFACES WITH SOAP
AND HOT WATER**



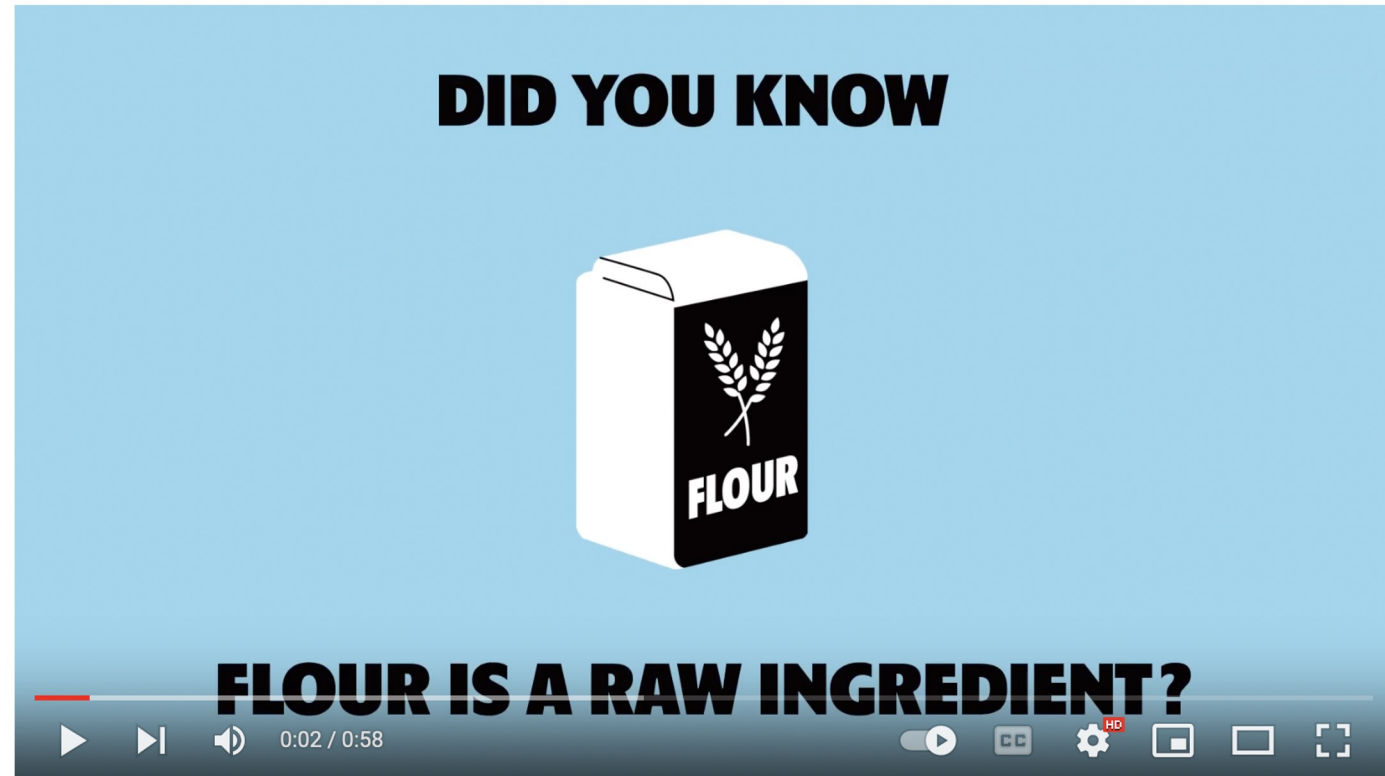
AND
**ONLY EAT FOOD THAT CONTAINS FLOUR
WHEN IT IS FULLY COOKED**



Endorsed By:



Watch the video at www.nama.com/floursafety



Wheat Flour Food Safety



North American Millers' Association

2 subscribers

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0



Share

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Link to PSA: <https://youtu.be/SR2YUFdhbYw>

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Use a digital thermometer to verify your **doneness temperatures...**

Heat Is A Baking Ingredient



homebaking.org/baking-food-safety

And carefully measuring how much you add is the key to baking success for students and their families.

Use a digital thermometer to measure your **ingredient and process temperatures...**



Cutting in Butter
35 to 40°F



Creaming Butter
68 to 70°F



Dry Blend Yeast
(Water Temp)
120 to 130°F



Blooming Yeast
(Water Temp)
105 to 115°F



Cheesecake
145 to 150°F



**Quiche/Custard/
Cream Pie**
160 to 165°F



Brioche
180 to 190°F



Bagels
185 to 195°F



Sourdough
190 to 210°F



Yeast Breads
190 to 210°F



Rich Cake
200 to 205°F



Muffins
205 to 210°F



Light Cake
205 to 210°F

<https://www.homebaking.org/wp-content/uploads/2022/04/HBA-Student-Flyer-with-recipe.pdf>
<https://www.homebaking.org/baking-food-safety/>

Discussion



HomeBaking.org/baking-food-safety/

- What questions do you have about flour food safety?
- What strategies do you think are most effective when sharing food activities and food safety?
- What resources would be helpful for you to have on hand in your work?

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Thank You Child Care Providers!

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ADM Milling
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Ardent Mills
Chelsea Milling Company
Colorado Wheat
Domino Foods/C&H Sugar
Grain Craft
Hammons Black Walnuts
Hopkinsville Milling Company
Kansas State U. Baking Science
Kansas Wheat Commission
King Arthur Baking Company
Lesaffre Yeast Corporation
Nebraska Wheat Board
North American Millers' Association
North Dakota Mill
North Dakota Wheat Commission
Northern Crops Institute
Oklahoma Wheat
Panhandle Milling Company



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Baker Bettie
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*1923 – 2023 Providing baking resources
for anyone who teaches baking.*

Partners:

American Assoc of Family & Consumer Sciences (AAFCS)
Family, Career and Community Leaders of America (FCCLA)
Child & Adult Care Food Programs (CACFP)
National Extension Association of Family & Consumer Sciences (NEAFCS)
The Family Dinner Project
Wheat Foods Council
Whole Grains Council



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PRESENTED BY



Sharon Davis

Family & Consumer Sciences Education

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POLL

**What are your favorite two
Meal Pattern Components
for Snack?**

RAISE HANDS

**Raise Your Hand if you've
ever been to one of our
virtual events.**

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Q&A

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What is the
Child and Adult Care
Food Program?





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Thank You!