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## Welcome!

### County Fair Food Judge Training



To help us with quality of the training, please  
mute your mic and stop video. Thank you!

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## Meet the Team!



Beth Hinshaw  
Extension Specialist  
4-H Youth Development  
Southeast



Karen Blakeslee  
Extension Associate  
Rapid Response Center  
Dept of Animal Sciences and Industry



Diane Mack  
Extension Specialist  
4-H Youth Development  
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Jennifer Terrell  
Extension Agent  
4-H Youth Development  
Southwind District



Linda Beech  
Extension Agent  
Emeritus



Crystal Futrell  
Extension Agent  
Health and Wellness  
Johnson County

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## And the Winner is...



### Judging Tips and Food Safety

Karen Blakeslee, M.S.



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## Follow Along!

Refer to the handout

**And the Winner is...**  
**A Guide to Judging Foods**

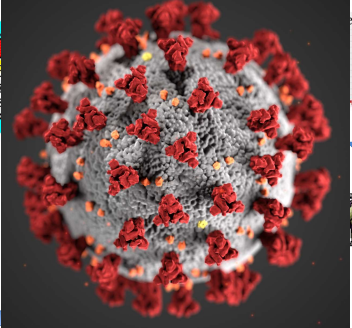
All handouts are at  
<https://www.rrc.k-state.edu/judging/index.html>



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## The Road to the Fair



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## What Makes YOU a Foods Judge?

- You love to educate!
- Know basic food science
- Nutrition knowledge
- Sensory qualities
- Impartial!
- No food allergies or sensitivities
- Show them...

**You enjoy baking!**



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## Take Your Tools!

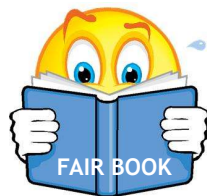
- Cutting board
- Serrated knife
- Small paring knife
- Offset spatula
- Fork(s)
- Hand towels
- Wash cloths
- Water to drink
- Carrots or plain crackers to cleanse your mouth
- Disinfectant wipes



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## READ THE RULES!



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## For Judge's, Leaders, Parents, Youth



Class No \_\_\_\_\_  
Foods Product \_\_\_\_\_  
Name \_\_\_\_\_  
County / District \_\_\_\_\_

Foods Label  
[https://www.kansas4-h.org/events-activities/fairs/kansas-state-fair/docs/foods-and-nutrition/Foods\\_Label.pdf](https://www.kansas4-h.org/events-activities/fairs/kansas-state-fair/docs/foods-and-nutrition/Foods_Label.pdf)


<http://www.ksre.ksu.edu/bookstore/pubs/4H488.pdf>

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## Many more resources!

Rapid Response Center



**2020 Virtual Fair Judges Training**  
First, thank you for your decision to judge foods and/or food preservation at county fairs or the State fair. This experience can be very rewarding for you and is a great way to help educate youth and others in making good quality and safe products.  
Below are resources to help educate you on how to be a judge for foods and food preservation. Please take the time to review the materials on each topic.

**Zoom Tips**  
Using Zoom  
Zoom Like You Mean It! - how-to video by Becky Hall, Cowley County Extension  
You Must File to Zoom! - how-to video by Becky Hall, Cowley County Extension


**Session 1 - Overview of Fair Judging, April 16, 2020**  
Introduction to Fair Judging - Presentation video (PDF)  
Creating a Positive Judging Experience  
Recording of Session 1

**Session 2 - Foods & Nutrition, April 23, 2020**  
Introduction video (PDF)  
Recording of Session 2

<https://www.rrc.k-state.edu/judging/index.html>

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## Other Items

- Gluten Free
- Educational Posters
- Gift Baskets
- Bread Sculpture
- Favorite Food Shows
- Cake Decorating (not in 4-H State Fair)
- Flop Class
- Special Baking Competition
- Others?



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## So What Can Be Entered at a Fair?

There are thousands of recipes!!



**PRACTICE! PRACTICE! PRACTICE!**

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## Why is Food Safety Important?

Every time you cook or bake in the kitchen you are doing a science experiment!

Not all recipes are appropriate for the fair!!

**Be smart about food safety!!**



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## Is This Food Exhibit Safe?

- Ask Yourself...
  - Does this food require refrigeration?
  - Would you eat this food at room temperature?
  - Will this product hold up to its standard when it is judged or displayed?
- Unsafe foods will be disqualified!**



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## What Makes a Food Unsafe?

- Three categories of hazards



Chemical

Biological

Physical

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## Microorganisms







- Biggest risk to human health
- Loss of shelf life
- Loss of product quality
- Can lead to foodborne illness



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## Conditions for Growth


F  Food	A  Acid	T  Time
T  Temperature	O  Oxygen	M  Moisture

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### What Grows Where?

- Bacteria, yeast, and molds can grow on just about any food
  - They really like carbohydrates and protein
- Some examples include...



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### Question #1



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### Question #1

#### Which item is safe at room temperature?

- Frosted Cupcake garnished with Bacon
- Sugar cookies**
- Homemade Pumpkin pie
- Fresh fruit garnish

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### Food Safety at the Fair


- What is perishable?
  - High in moisture, protein and neutral acidity
  - Anything that needs refrigeration
  - Baking does not guarantee safety!**
- Many fairs have a Perishable Foods class
  - Bring at proper temperature, judge, take home
- Perishable foods are good options for a Favorite Food Show or demonstration
- County Fairs that have refrigeration can allow perishable exhibits
  - Not allowed at State Fair 4-H Foods!

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### Full Disclosure...

- KSU Study of many frostings and fillings
- Still finishing up results
- Our guidelines stay the same for 2020!
- If study results merit changes, that will occur for 2021



Water activity meter      pH meter

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### Perishable Foods

- Icings and frostings made with RAW eggs
- Cream cheese frosting
- Chocolate Ganache
- Heavy cream frosting
- Lemon curd



**NOT ACCEPTABLE!**


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### Perishable Foods

- **Fresh** fruit OR vegetable as a garnish
  - Once these are cut, they must be refrigerated
  - Many whole fruits need refrigeration
    - Strawberries
    - Raspberries
  - Many vegetables need refrigeration after harvest
    - Peppers



**NOT ACCEPTABLE!**

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### Fillings with High Amount of Dairy

- **Any** Dairy based filling
  - Cream cheese
  - Sour cream
  - Ricotta
- Moisture level is higher in the filling and the food would need refrigeration to prevent microbial growth



**NOT ACCEPTABLE!**

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### Pies

- Custard Pie
  - Pumpkin
  - Cheesecake
- Cream/Meringue Pie
  - Coconut
  - Chocolate
  - Lemon
  - Any flavor!
- Bacteria can multiply in these moist desserts high in dairy and eggs at room temperature
- Fresh Strawberry pie
- Chiffon pie



**NOT ACCEPTABLE!**

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### Bread or Cake in a Jar

- Jars should not be used in oven
  - Per manufacturer recommendations
- Sealed jar creates anaerobic environment that supports growth of Botulism!



**NOT ACCEPTABLE!**


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### Baking in Brown Paper Bags

- “Do **not** use **brown paper bags** from the grocery or other stores for cooking. They are not sanitary, may cause a fire, and may emit toxic fumes. Intense heat may cause a bag to ignite, causing a fire in the oven and possibly contaminating the food. **The ink, glue, and recycled materials in paper bags may emit toxic fumes when they are exposed to heat.** Instead, use commercial oven cooking bags.”

Source: USDA FSIS



**NOT ACCEPTABLE!**

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### Say NO to Alcohol!

- 4-H Youth are not of legal age to purchase or possess alcohol
- Not all of the alcohol is evaporated or baked off during cooking or baking.
  - Alcohol retention ranged between 4% and 85%
  - Depends on severity of heat treatment



**NOT ACCEPTABLE!**


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[https://www.nal.usda.gov/sites/default/files/fnic\\_uploads/Alcohol-Retention.pdf](https://www.nal.usda.gov/sites/default/files/fnic_uploads/Alcohol-Retention.pdf)

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### Cooking in Clay Pots

- Non-glazed terra cotta clay pots
  - Flower pots
  - Not food grade
  - May contain lead
- Use pots with food grade glaze
  - Labeled for food use
- Might show up in a gift basket




**NOT ACCEPTABLE!**

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### Friendship Bread Safety

- If starter was NOT fermented in the refrigerator, it will NOT be acceptable
  - Studies have shown that *Salmonella* and *Staphylococcus aureus* can grow during prolonged fermentation at room temperature
- Typically use milk which can spoil



**NOT ACCEPTABLE!**

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[http://www.foodsafety.wisc.edu/assets/pdf\\_files/friendship\\_bread.pdf](http://www.foodsafety.wisc.edu/assets/pdf_files/friendship_bread.pdf)

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### Bacon or Meat

- Meat is perishable
- May not be completely cooked
- Best eaten fresh out of the oven
- Better for demonstration or Favorite Food Show




**NOT ACCEPTABLE!**

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### Flavored Oils

- Herbs, vegetables, and garlic in oil
  - Garlic in oil has caused Botulism
  - Must be refrigerated
- Flavored vinegars are safe
- Might be in a gift basket
- [www.ext.colostate.edu/pubs/foodnut/09340.html](http://www.ext.colostate.edu/pubs/foodnut/09340.html)
- <https://www.extension.uidaho.edu/publishing/pdf/PNW/PNW664.pdf>



**FLAVORED OILS NOT ACCEPTABLE!**

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### Raw Flour

- Raw flour linked to foodborne illness
- No raw flour in no-bake foods
  - Includes ALL types of flour
- Does not apply to oatmeal
  - Oats are heat treated in processing



<https://www.ksre.k-state.edu/foodsafety/topics/preparation.html>

**NOT ACCEPTABLE!**

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### Question #2



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**K-STATE** Research and Extension **Question #2**


Which of these foods are perishable and require refrigeration for food safety?

- A. Chocolate chip cookies
- B. Cream Cheese frosting
- C. Fresh Strawberry pie
- D. Both B & C**

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**K-STATE** Research and Extension **What is Safe and Non-Perishable?**

- Dairy products **incorporated into the entire batter**
  - Not as separate layer
- Examples include
  - Cream cheese
  - Sour cream
  - Milk
  - Cream
- These get baked into a drier environment



ACCEPTABLE!

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**K-STATE** Research and Extension **What is Safe and Non-Perishable?**

- Eggs mixed into the batter and baked
- Egg glazes on top of breads prior to baking
- Egg white powder
  - Meringue powder
  - Used in place of raw egg whites for frosting
- Egg in pie crust




ACCEPTABLE!

Knowledge for Life

**K-STATE** Research and Extension **What is Safe and Non-Perishable?**

- Fruit baked into a product
  - Pineapple Upside Down Cake
  - Blueberry muffins




ACCEPTABLE!

Knowledge for Life

**K-STATE** Research and Extension **What is Safe and Non-Perishable?**

- Fruit Pie
  - High sugar content takes moisture away from bacteria
  - Baking reduces bacteria issues
  - Exception is refrigerated pie like fresh Strawberry
- Pecan or any Nut Pie
  - High sugar binds up moisture making it unavailable for bacteria to use




ACCEPTABLE!

Knowledge for Life

**K-STATE** Research and Extension **What is Safe and Non-Perishable?**

- Frostings/Icings
  - High sugar content suppresses bacterial growth
  - Use small amount of liquid
    - Milk, juice, water
  - Add flavorings
    - Cream cheese flavor
    - Fruit flavor
  - Shortening withstands heat better than butter
  - German Chocolate Frosting
  - Commercial frosting
    - Note in the recipe



ACCEPTABLE!

Knowledge for Life

### K-STATE Research and Extension What is Safe and Non-Perishable?

- Cheese mixed into entire batter
  - Hard Cheese
    - Shredded Cheddar
  - Cottage Cheese
  - Ricotta Cheese
  - Cream Cheese
- These are baked into a dry environment, less moisture



**ACCEPTABLE!**

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### K-STATE Research and Extension Is it Nutritious?



Choose **MyPlate.gov**


- Consider the Dietary Guidelines
- Use of whole grains, fiber
- Low in fat
- Low in sodium
- Reduce added sugars
- Proper portion size

**Prize winners do not always = high fat or high sugar!**

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### K-STATE Research and Extension Portion Size

- Portion size!
  - Bar cookies – 2-inch
  - Drop cookies – 2 half dollar coins
  - Cinnamon roll – hockey puck
  - Roll – bar of soap
  - Muffin – tennis ball
  - Biscuit – hockey puck



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### K-STATE Research and Extension When are Baked Goods Done?


**When are Baked Goods Done?**

- Gently touch the top and it should bounce back.
- Use an oven thermometer to check oven accuracy.
- Use a timer to follow recommended recipe baking time.
- Insert a toothpick or skewer into the middle to check for stickiness.

**Take the Temperature!**

**Suggested Final Temperatures**

- Layer cakes - 205-210°F
- Pound cake - 210°F
- Jelly roll cakes - 190-195°F
- Muffins - 210°F
- Quick bread - 210°F
- Yeast bread - 195-210°F
- Bundt cake - 212°F
- Yeast rolls - 190-195°F



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### K-STATE Research and Extension Most Common Baking Problems


- Incorrect ingredient measurement
- Overmixing
- Undermixing
- Oven problems
  - Temperature wrong
  - Underbaked
- Pans
  - Greasing too much
  - Wrong size
  - Type of pan




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### K-STATE Research and Extension Types of Pans

- Shiny pans reflect heat
  - Gives lighter color
- Dark pans absorb heat
  - Gives darker color
- Reduce oven temp 25°F for glass pans
- Grease bottoms of cake and bread pans
- Greasing sides is optional
- Can use parchment paper



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Question #3

?

?

?

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Question #3

Which tests help determine doneness of baked goods?

- A. Baking time
- B. Color
- C. Touch
- D. Food thermometer
- E. All of the above**

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5 minute break!

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Judging Basics

- Look, touch, smell, taste
- Appearance, shape, size
- Lift product
- Cut into the middle
- Feel the texture
- Smell for pleasant, characteristic odor
- Taste a small piece and check mouthfeel




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Cookies

- Like cake, amount of ingredients and mixing different
- Types of cookies
  - Bar
  - Drop
  - Pressed
  - Molded
  - Rolled
  - Icebox/Refrigerator



Wheat Foods Council

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Tips for Better Cookies

- Stir dry ingredients before measuring
- Sugar affects spread
- Brown sugar adds moisture
- Margarine & butter gives rich taste, flatter shape, more spread
- Soft fat aids creaming
- Milk and water can be interchanged





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## Tips for Better Cookies, cont.

- Sugar and fat should be creamed until fluffy
- Chilled dough will be stiffer and spread less
- Avoid over handling, makes cookies tough
- If dough too stiff, add liquid; if too soft, add flour
- Bake for minimum time and check for doneness



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## What's Wrong with This Cookie?



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## Let's Judge Bar Cookies!


**Whole Wheat Chocolate Chip**

1 cup butter, room temp  
¾ cup granulated sugar  
¼ cup packed brown sugar  
1 tsp. vanilla extract  
2 eggs  
1 cup whole wheat flour  
1 ¼ cups all purpose flour  
1 tsp. baking soda  
1 tsp. salt  
2 cups semisweet chocolate chips  
1 cup chopped nuts

Criteria	Points	Star	Star	Star	Star	Comments
Appearance (top)	1	1	1	1	1	
Appearance (bottom)	1	1	1	1	1	
Texture	1	1	1	1	1	
Flavor	1	1	1	1	1	
Overall	1	1	1	1	1	

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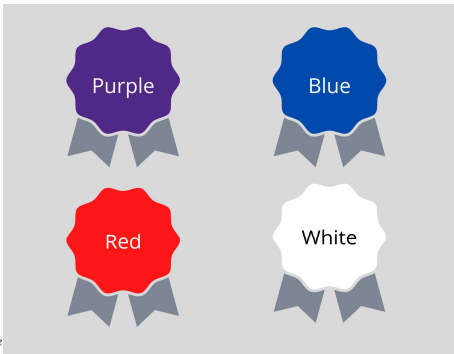
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## Choose the ribbon!



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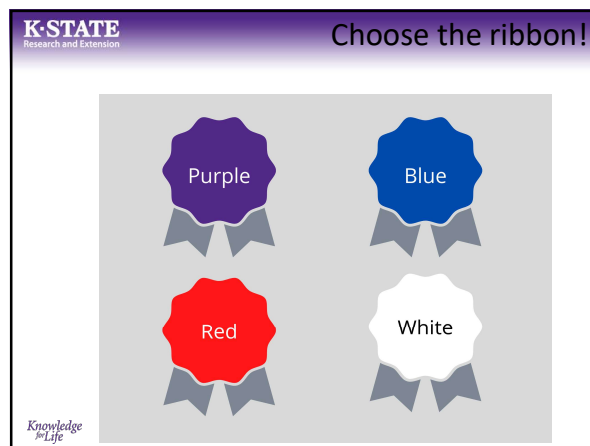
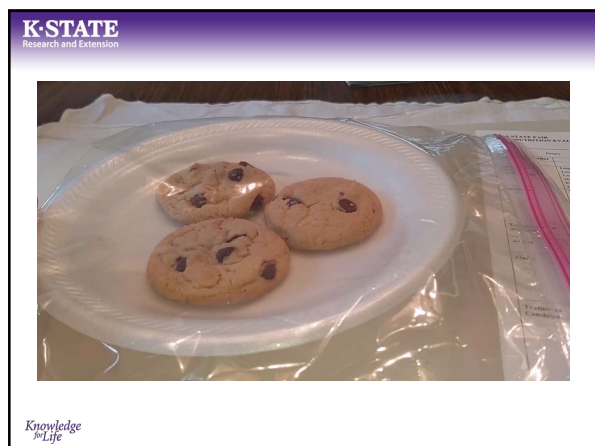
## Let's Judge Drop Cookies

**Chocolate Chip Cookies**

2/3 cup margarine  
2/3 cup butter flavored shortening  
3/4 cup brown sugar  
3/4 cup granulated sugar  
2 eggs  
2 teaspoons vanilla  
3 1/4 cups all-purpose flour  
1 teaspoon baking soda  
1 teaspoon salt  
1 cup semi-sweet chocolate chips

Criteria	Points	Star	Star	Star	Star	Comments
Appearance (top)	1	1	1	1	1	
Appearance (bottom)	1	1	1	1	1	
Texture	1	1	1	1	1	
Flavor	1	1	1	1	1	
Overall	1	1	1	1	1	

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### Quick Breads

- Mixing is key step
- Baked immediately after mixing
- Leavened with air, steam, baking soda or baking powder
- Grease pans first
- Dust berries and nuts with flour to prevent sinking

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### What about liners?

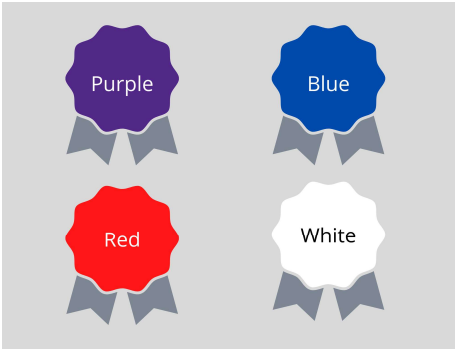
- Not needed for muffins!
- Simply grease the pan
- Muffins are sturdy and do not need paper liner support
- Often stick and tear apart the muffin
- These are intended for cupcakes

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[illegible]

## Choose the ribbon!



A 2x2 grid of award ribbons. Each ribbon is a scalloped-edged circle with a grey ribbon bow at the bottom. The ribbons are colored: top-left is purple with the word 'Purple' in white; top-right is blue with the word 'Blue' in white; bottom-left is red with the word 'Red' in white; bottom-right is white with the word 'White' in black.

Purple

Blue

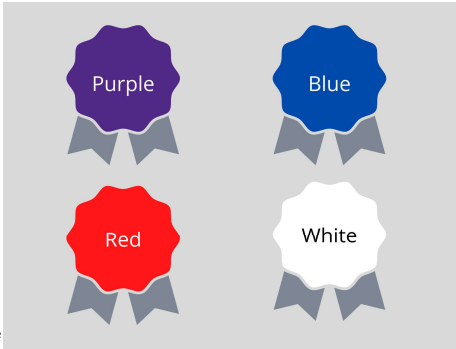
Red

White

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# Choose the ribbon!



A 2x2 grid of four colored ribbons, each with a grey ribbon tail. The ribbons are labeled: Purple (top-left), Blue (top-right), Red (bottom-left), and White (bottom-right).

Purple

Blue

Red

White

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## Let's Judge Quick Bread

### Banana Bread

3/4 cup sugar  
3/4 cup oil  
2 eggs  
3 large ripe bananas, mashed  
1/4 cup water  
1 cup quick oats  
1 1/2 cup flour  
1 3-oz package instant pudding mix (vanilla or white chocolate)  
1 teaspoon baking soda  
1 teaspoon baking powder  
1/2 teaspoon salt

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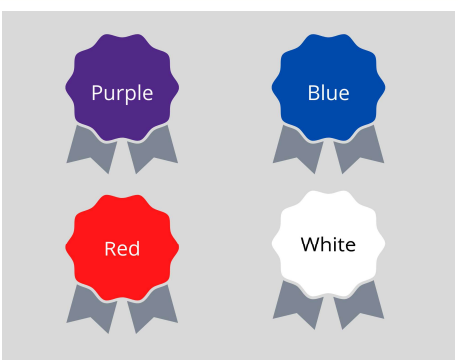
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## Choose the ribbon!



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## Bread Making Tips

- Kneaded and no-knead types
- Kneading is critical!
  - By hand or mixer
  - Usually 5-12 minutes
- Let rise in warm, draft-free place
- Scale dough for consistency
- Do the dent test!
- Don't let dough over-rise!




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## Key Breadmaking Temperatures

- 100° to 110°F – Temperature to dissolve yeast
- 120° to 130°F – Temperature for fast rising yeast mixed with flour
- 70° to 80°F – Liquid temperature for bread machine bread
- 135°F – Yeast is killed
- 84° to 86°F – Ideal yeast dough temperature
- 80° to 85°F – Ideal rising temperature
- 190° to 205°F – Final internal temperature of baked bread
- 70°F or below – Causes quick staling of bread, but can prevent mold growth

» Source: Yeast Breads Made Easy, KWC



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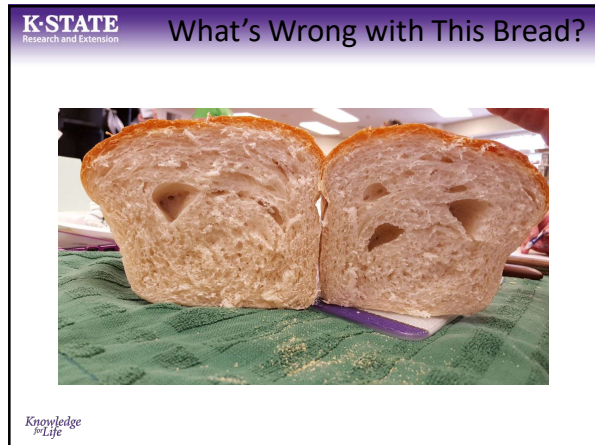
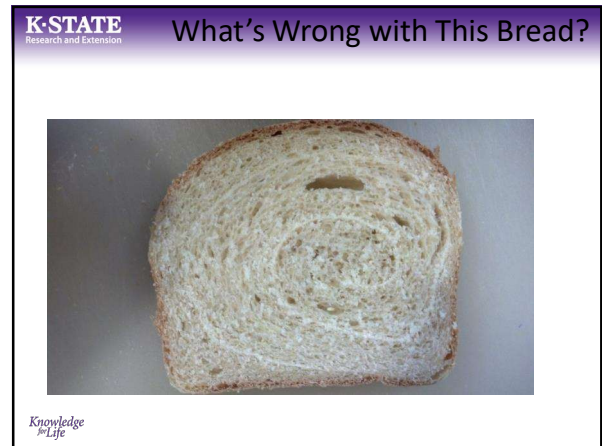
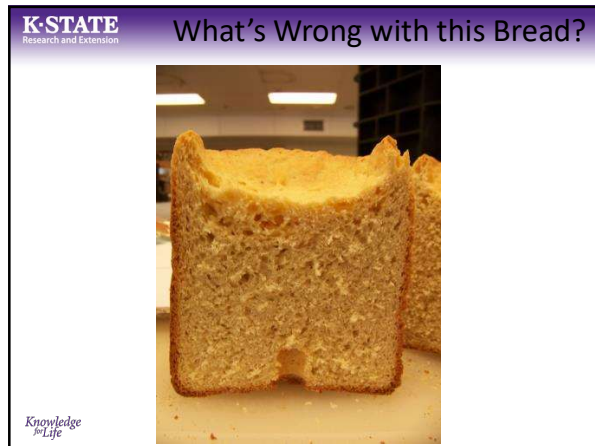
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## What's Wrong with this Bread?



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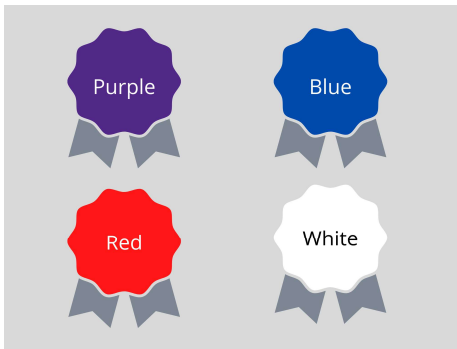






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### Choose the ribbon!



Purple Blue  
Red White

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### Unshortened Cakes

- Angel Food Cake
  - Egg whites, sugar and cake flour
  - Small amounts of cream of tartar, salt, flavoring
- Sponge Cake
  - Has egg yolk foam and egg white foam
- Chiffon Cake
  - Sponge Cake with vegetable oil added



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### Unshortened Cake Tips

- For Angel Food Cakes, no fat present
- Don't use plastic or wooden bowls
- Make a good egg white foam
- Add cream of tartar at beginning
- Fold, don't stir!
- Bake until cake springs back when touched
- Cool upside down to stretch and set cake



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### What's Wrong with this Cake?



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### What's Wrong with this Cake?



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### What's Wrong with this Cake?



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## Shortened Cakes

- Creaming method
  - Gives light, well-aerated texture
  - Beat butter and sugar until light and fluffy
  - Add eggs, one at a time, beat well
  - Alternate dry and liquid ingredients
    - Alternating ensures even blending
    - Don't over mix




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## Shaping Layer Cakes

- Measure ingredients properly
  - Spoon ingredients into measuring cups
  - Level with a knife
- Sift or stir the flour, it compacts over time
- Grease pan thoroughly
  - Line bottoms with wax or parchment paper
- Weigh the pans of batter
  - Fill no more than 2/3 full
  - Spread batter evenly in pan



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## What's Wrong with this Cake?



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## Let's Judge Layer Cake

**Layer Cake**  
White cake mix prepared according to package directions  
Commercial raspberry jam between layers  
**Frosting**  
2 cups powdered sugar  
2 tablespoons margarine  
2 tablespoons butter-flavor shortening  
2 tablespoons milk  
1/4 teaspoon clear vanilla

Category	Points	Comments
Appearance	10	Good appearance, but some frosting on sides.
Texture	10	Good texture, but some frosting on sides.
Flavor	10	Good flavor, but some frosting on sides.
Overall	30	Good overall, but some frosting on sides.

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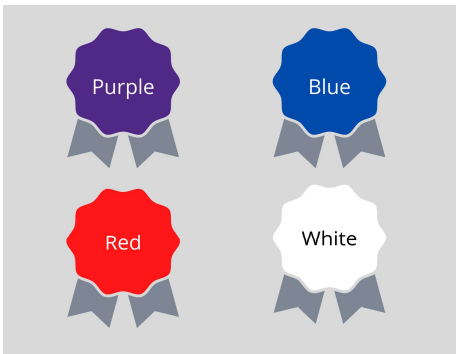
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## Choose the ribbon!



Purple Blue  
Red White

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## Pie Crust Problems

- Soggy bottoms
  - Filling not fully thickened
  - Not baked long enough
  - Baked at too low of temperature
  - Pie pan placed on baking sheet or aluminum foil which can interfere with heat transfer
  - Crust torn and filling ran underneath crust

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## Pie Crust Problems

- Crust too brown
  - Too much protein and sugar
  - Baked too long or too hot
  - Burnt spots due to uneven dough thickness
  - Use pie shield to prevent edges from browning too much
- Crust shrank
  - Dough stretched
  - Too much gluten formation
  - Too much water added
  - Dough overworked

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## Fruit Fillings

- Balance between fruit, juice, sweetener, and thickener
- Use fresh, frozen, cooked, canned or rehydrated dried fruit
- Starch thickener typically used
  - Cornstarch – makes firm gel
  - Clear Jel – waxy maize or modified starch, makes soft paste
  - Tapioca
- Flour makes a cloudy gel, breaks down

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## Let's Judge Pie

### Fresh Cherry Pie

**Filling**

- 3 1/2 cups fresh sour cherries
- 3/4 cup sugar
- 3 tablespoons cornstarch
- 1/2 teaspoon salt
- 1/4 teaspoon almond extract
- 2-3 drops red food coloring

**Crust**

- 2 cups flour
- 10 tablespoons white solid shortening
- 2 tablespoons butter-flavor solid shortening
- 1/2 teaspoon salt
- 1/2 cup cold water whisked with 1 tablespoon oil (use just enough to moisten flour mixture; will not need all of this)

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