



MICROWAVING BREADS AND CEREALS

LESSON 4

Extension Family Resource Management Specialists
The Texas A&M University System

Lesson 4 contains experiments using bread and cereal products. You will, in some instances, use techniques from the previous lessons. Have them handy for reference.

The information in Lesson 4 will give you some new experiences. If you find something you tried once, jot down the results you had. Just read carefully to see if any of the directions are different.

If, after you try an experiment, you find that it was not an efficient use of your microwave for you and your family, note that. As with the previous lessons, read this once or twice before starting.

Feel free to complete as many of the experiments

as you want to. Work on experiments you have not previously tried. For example, if you cook cereal for your family several times a week, don't do that experiment. Make a note of it on your lesson.

This lesson provides a variety of experiences using bread and cereal products. Experiments include:

- Toppings and coatings for appearance,
- Techniques for microwaving pasta and rice,
- Equipment—round, square and tube pans.

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The bread and cereals food group from the *Daily Food Guide* includes all products made with whole grains or enriched flour or bread, biscuits, muffins, waffles, pancakes, cooked or ready-to-eat cereals, cornmeal, flour, grits, macaroni, spaghetti, noodles, rice, rolled oats, barley and bulgur.

This food group provides important sources of B vitamins, iron and protein in the diet. The bread and cereals group is not the richest source of these nutrients, but contributes significantly.

How do bread and cereal products react in your microwave? They can be defrosted, warmed, freshened if stale, cooked or baked. Improper treatment can cause a soggy or extra dry product. Baked products cook so rapidly they do not have time to brown, so unless you have a browning unit, you will not have a rich golden crust. Refer to the quick bread and pastry lessons for methods of coating foods to provide an acceptable appearance.

I. Cereal

Cereals, such as oatmeal, cream of rice and wheat, cornmeal, and so forth, cook faster and require only one utensil. Use a large enough container to prevent boilovers. Stir cereal once, halfway through cooking. Microwaving cereals eliminates having a messy pan to clean.

II. Rice

Rice requires a different technique. There is only a small amount of difference between cooking time for rice in the microwave and on the range top. Decide which is the best method for the amount of rice you cook.

The procedure for microwaving rice requires the bowl be covered with plastic wrap. This allows the dry rice to absorb the water and become fluffy.

Undercook rice and pasta 3 to 5 minutes if you are combining it in a casserole recipe which requires further cooking.



III. Pasta

Pasta's (spaghetti and noodle products) cooking time is also about the same length of time as conventional methods. Again, decide if cooking these products is wise use of your microwave.

The utensil used needs to fit the pasta. For example, spaghetti can be cooked in a 9-inch × 13-inch × 2-inch utility dish. Cover the containers with plastic wrap. Leave one corner uncovered to allow steam to escape.

IV. Quick Breads

Muffins, fruit breads and cornbread all microwave quickly. When you have guests, pop a coffee cake or sweet rolls in the oven and in a few minutes have something hot to eat. Rotate quick breads for an even, or level, product which is not overcooked. Experiment with toppings and browning agents to cover the "unbaked" look.

V. Yeast Breads

Breads cooked in the microwave oven do not brown or develop a crust because there is no hot air in the oven to dry out the surface. As with quick breads, you may wish to experiment with toppings to give a finished appearance. Microwaved breads rise higher during cooking than conventionally baked bread. Use a larger loaf dish and cook carefully to avoid large air pockets which can collapse and cause uneven shape. Yeast bread will look set and dry on top and, when the surface is touched, will spring back.

VI. Pie Pastry

Microwaved pastry is exceptionally tender, flaky and puffy. It cooks so rapidly it does not brown. To give it a finished appearance, mix the dough with a few drops of food coloring, or brush the crust with egg yolk, vanilla, molasses, maple syrup or dark corn syrup.

Check for doneness. A clear glass pie plate is best because you can see the bottom. The crust should look opaque and dry. The top will be dry and blistered.

Crumb crusts take only a few minutes to prepare and are microwaved just long enough to become firm. Use graham crackers, crushed vanilla wafers, ginger snaps or chocolate wafers. Fill with creamy filling for quick dessert. (Not included in the experiments, but you might like to try it. Check your cookbook for instructions).

VII. Cakes

Many utensils can be used for microwaving cakes. Microwaved cakes rise higher than conventionally baked, so fill pans no more than one-third to one-half full. Make cupcakes with the extra batter. Use a vegetable spray or waxed paper to line the bottom of pans for baking. Leave the sides ungreased so cake can cling as it rises. Do not grease or flour baking pans because the heating process causes these to form an undesirable coating.

VIII. Cookies

Most bar cookies bake well in the microwave oven. Rotate the baking dish a couple of times. Prepare the pans by greasing only the bottoms, leaving the sides clean.

Use doughs which do not require browning or sprinkle the top with nuts or cinnamon-sugar mixture.

Little time is saved by microwaving drop cookies. Dry-textured doughs are the most satisfactory for microwave baking. A cookie sheet can be made from a piece of cardboard covered with waxed paper. Drop cookies in a circle for best results.

EXPERIMENTS

Experiment 1—Cereal

Cook your favorite hot cereal. It can be cooked in one easy step with no messy pan to clean.

Use cereal box instructions for the amount of ingredients. Place them in a bowl large enough to avoid boilovers. *Use high power level and stir halfway through the cooking time.* Use hot tap water to mix with cereal. Add cinnamon, nutmeg or mace flavoring.

To cook quick oatmeal, cornmeal, Cream of Rice®, Instant Cream of Wheat®:

- 1-serving size -----1 to 2 minutes on high
- 2-serving size -----2 to 3 minutes on high
- 4-serving size -----4 to 6 minutes on high
- 6-serving size -----6 to 8 minutes on high

To cook old-fashioned oatmeal, quick grits, Regular Cream of Wheat®:

- 1-serving size -----3 to 5 minutes on high
- 2-serving size -----6 to 7 minutes on high
- 4-serving size -----8 to 9 minutes on high
- 6-serving size -----9 to 12 minute on high

Your Reactions

1. List cereals cooked. (Try two types.)

2. Comments about cooking cereals.

3. My family's reaction.

- | | Liked | Disliked | Changes I would make |
|----------------|-------|----------|----------------------|
| a. Consistency | _____ | _____ | _____ |
| b. Flavor | _____ | _____ | _____ |
| c. Convenience | _____ | _____ | _____ |

4. Do you consider cooking cereal a wise use of your microwave?

Yes _____ No _____

5. What does your microwave cookbook tell you about cooking cereals?

6. Additional comments _____

Experiments 2, 3 and 4—Rice

If you choose to work the experiments with rice, do 2, 3 and 4, each at different times.

Experiment 2: Cook 1 cup regular rice on a range burner following the package instructions.

Time the pan and water are placed on range _____.

Time rice is added to boiling water _____.

Length of time rice is cooked _____ minutes.

Standing time, if any _____ minutes.

Total time used cooking rice on a range top burner _____ minutes.

Experiment 3: In a 2-quart casserole, measure 1 cup regular rice, 1 teaspoon salt, 1 teaspoon margarine. Stir in 2 cups hot tap water. Cover. Microwave on high 5 minutes. Complete cooking at 50 per cent power, 11 to 15 minutes.

Total time used in your microwave _____ minutes.

- | | Liked | Disliked | Changes I would make |
|----------------|-------|----------|----------------------|
| a. Consistency | _____ | _____ | _____ |
| b. Flavor | _____ | _____ | _____ |
| c. Convenience | _____ | _____ | _____ |

Experiment 4: Write the instructions for cooking rice from your microwave cookbook.

If different than Experiment 2, prepare rice according to instructions. The total time to cook 1 cup of regular rice was _____ minutes.

1. Did you notice any difference in the texture of the rice fixed in the three experiments?

Yes _____ No _____

If yes, explain how it was different.

2. Which do you find to be the most economical method of cooking rice?

Why?

Experiment 5—Pasta

Cooking pasta just for the experience is neither practical nor advisable. So, included are recipes that use three forms of pasta. Use one or all the recipes, or some from your recipe files.

What should you look for when cooking pasta? Is it cooking evenly, without hard spots? Check the time carefully and watch for boilovers. Adding oil to the water can help prevent boiling over.

Quick and Easy Macaroni and Cheese*

- | | |
|---|------------------|
| 1 package (7 or 8 oz.) elbow macaroni | 3 cups hot water |
| 1 pound pasteurized process cheese spread | 2 teaspoons salt |
| 1 5½-ounce can evaporated milk | |

Using a 3-quart casserole, place salt, hot water and macaroni (covered) into microwave oven. Cook on high 10 minutes, stir after 5 minutes. Drain. Cut cheese into cubes, add to macaroni along with the

milk. Stir to distribute the cheese. Microwave on high 6 to 8 minutes, stirring after 3 minutes, until cheese melts and mixture bubbles. At the end of the cooking time, stir again to blend. A dash of paprika will add a little color to the top. Serves 6 to 8. (For a tangy flavor, add a few drops worchestershire sauce.)

Spaghetti*

- | | |
|---------------------------------|------------------|
| 7- or 8-ounce package spaghetti | ½ teaspoon salt |
| 6 to 8 cups hot water | 1 tablespoon oil |

Place spaghetti in 9-inch × 13-inch × 2-inch dish. Add salt and oil to water, pour over spaghetti, cover with plastic wrap, turn back at edge to vent. Microwave on high 12 to 14 minutes. Stir or rearrange after 8 minutes. Serve with your favorite spaghetti sauce.

Lasagna*

- | | |
|-----------------------------|--|
| ½ pound lasagna noodles | 1 pound ground chuck, cooked and drained |
| 2 8-ounce cans tomato sauce | 2 cups cottage cheese |
| 1 6-ounce can tomato paste | 1 egg |
| 1 tablespoon leaf oregano | 1 tablespoon dried parsley flakes |
| 2 teaspoons basil | ½ teaspoon salt |
| ½ teaspoon salt | 1 6-ounce package sliced Mozzarella cheese |
| ¼ teaspoon garlic powder | ½ cup grated Parmesan cheese |

Place lasagna noodles in 8-inch × 12-inch × 2-inch dish and add ½ teaspoon salt and 1 tablespoon oil to enough water to cover noodles. Cover dish with plastic wrap, turn back on one edge to vent. Microwave on high 8 minutes. Drain in a colander.

In a bowl, mix tomato sauce, paste, oregano, basil, salt and garlic powder. Spread ½ cup sauce over bottom of 8-inch × 12-inch × 2-inch dish. Add cooked ground beef to mixture in bowl.

In small bowl, mix together cottage cheese, egg, parsley and salt. Layer noodles, half the cottage cheese mixture, half the Mozzarella cheese, half of tomato sauce-meat mixture on top of tomato sauce in dish. Repeat layers. Sprinkle Parmesan cheese on top. Cover with waxed paper. Microwave on high 2 to 26 minutes, rotating dish one-fourth turn every 8 minutes. Let the dish stand about 10 minutes before cutting. Serves six to eight.

*Used with permission from the *G.E. Microwave Guide and Cookbook*.



Your Reactions

1. Which recipe(s) did you experiment with?

2. Was the pasta cooked to your satisfaction in the time given?

Yes _____ No _____

3. Was the pasta product cooked evenly throughout?

Yes _____ No _____

4. What instruction for cooking pasta is given in your cookbook?

5. Does an 8-inch × 12-inch × 2-inch dish fit in your oven so you can turn it one fourth as directed?

Yes _____ No _____

If not, what did you do to compensate? _____

6. Do you feel cooking pasta is wise use of your microwave? Yes _____ No _____

Experiment 6—Quick Breads with Sweet Toppings

Quick breads can add variety to a meal. When served with soups or salad they can provide unique flavors with color, texture and temperature contrasts. Fruit breads can be used as snacks and desserts. Muffins will microwave rapidly and will not have time to brown. When using cupcake papers, use two for each muffin. This will absorb moisture and help prevent sogginess.

The following experiments can help you determine what toppings your family will like. Use the following recipe or your favorite plain muffin recipe.

Rich Muffins

- | | | | |
|----|---------------------------------|---|-----------------------------|
| 4 | tablespoons butter or margarine | 1 | teaspoon grated orange peel |
| 1 | cup all-purpose flour | ¼ | teaspoon salt |
| 3 | tablespoons sugar | ½ | cup milk |
| 1½ | teaspoons baking powder | 1 | egg, slightly beaten |

Melt butter in custard cup 1 to 1½ minutes on high power. In order given, place remaining ingredients in mixing bowl. Blend in butter. Fill muffin cups or doubled (2 papers together) papers one-half full.

Microwaving time:

one muffin -----25 to 40 seconds

two muffins -----¾ to 1½ minutes

four muffins -----1½ to 2½ minutes

six muffins -----2½ to 4½ minutes

Since browning can only be achieved with a browning unit or browning agents, try various toppings on muffins to give a finished appearance. Makes six to eight muffins.

Toppings to Try

- Leave two muffins plain.
- Top two muffins with cinnamon and sugar. (Mixture: 1 tablespoon sugar and ⅛ to ¼ teaspoon cinnamon.)
- Top two muffins with chopped nuts.
- Top two with crushed cereal or toasted coconut.

What comments did your family make concerning the muffins? To get their immediate reactions have this sheet handy while they are testing.

1. Appearance—even in shape?

Yes _____ No _____

Other comments _____

2. Flavor—did toppings overpower the flavor of the muffin?

Cinnamon and sugar? Yes _____ No _____

Nuts? Yes _____ No _____

Coconut or cereal? Yes _____ No _____

Did any of the toppings enhance or complement the flavor of the muffin?

Yes _____ No _____

If yes, which one(s)? _____

3. Texture _____

4. Moistness _____

Conclusions from experiment: Whenever I prepare plain muffins, _____ topping will be acceptable to my family.

Comment on the muffin experiments.

Experiment 7—Quick Breads with Non-Sweet Toppings

Not all quick breads are sweet. Some are made to go with main dishes such as ham and beans. Cornbread is a good example of this. Conventionally baked it will have a golden crust, even or level appearance, be moist, yet may crumble slightly when cut. Microwaved, it will have that same moist crumb, but lack the golden browned crust. Rotate the container during microwaving so the cornbread will be even.

For an experiment to determine desirable toppings for non-sweet quick breads, use the following cornbread recipe or your favorite recipe.

Cornbread Ring

Stir together in mixing bowl:

- 1 cup yellow corn meal
- 1 cup all-purpose flour
- 2 tablespoons sugar
- 4 teaspoons baking powder
- ½ teaspoon salt

Add to dry ingredients, then beat about 1 minute by hand:

- 1 egg
- 1 cup milk
- ½ cup cooking oil

Grease an 8-inch round dish or tube pan with shortening. If using a round dish, place a glass in center (note Lesson 2, Part IV, "Containers"). Pour batter around dish. Leave one section plain, select two or three toppings to complete the experiment. Microwave on medium 5 minutes, rotate dish one-half turn. Microwave on high 3 to 5 minutes. Test with toothpick. Makes one 8-inch ring.

Toppings

Onion: Crush canned french fried onion rings. Add Parmesan cheese for variation.

Bacon-cheese: Microwave 3 slices of bacon until very crisp. Crumble finely. Mix with ⅓ cup grated sharp cheddar cheese.

Onion-green pepper: Saute ¼ cup each, onion and green pepper, in 1 teaspoon butter 3 to 4 minutes on high. Sprinkle with paprika.

Taco seasoning mix: Sprinkle over quick bread.

Another method of giving a quick bread a browned look is to coat a tube pan with shortening, add about ¼ cup of cornflake crumbs, shake around pan to coat evenly. Add cornbread mixture, microwave according to recipe. When done invert cornbread onto serving plate.

1. Indicate toppings used on the cornbread ring.

Topping used	Liked	Disliked
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

2. Appearance—even in shape? Yes _____
No _____

Other comments about appearance _____

3. Flavor—did topping overpower the flavor of the cornbread?

Onion	Yes _____	No _____
Bacon-cheese	Yes _____	No _____
Onion-green pepper	Yes _____	No _____
Taco seasoning mix	Yes _____	No _____

Other (Please list)

_____	Yes _____	No _____
_____	Yes _____	No _____

4. Texture—Did it slice nicely? Yes _____ No _____
- Baked evenly throughout? Yes _____ No _____
- Moist, but not soggy? Yes _____ No _____
- Any hard, dry spots? Yes _____ No _____
- Additional comments or suggestions _____
- _____
- _____

Use a square pan to bake cornbread. Note the appearance as it bakes. Rotate pan for more even appearance. What happens in the corners of the pan?

Did you find it necessary to shield the corners? Yes _____ No _____

Was it necessary to shield any spots on the cornbread? Yes _____ No _____

What causes hard spots? _____

Did you find a round pan or square pan easiest to use when preparing a quick bread? _____

Why? _____

Experiment 8—Quick Breads

Loaf of Bread Using Loaf Pan

Using a recipe in your cookbook, prepare a banana nut bread, date nut bread or other quick bread. Bake in loaf pan.

1. Copy your recipe and instructions:

2. Appearance _____

3. Texture _____

4. Did it bake evenly? Yes _____ No _____

Any problems? (Please list.) _____

Describe the four corners _____

Shielding with foil can eliminate hard, dry corners.

How often did you rotate the dish? _____

Experiment 9—Yeast Bread

Frozen Bread Dough

Rub 1 tablespoon soft butter over bottom and sides of 9-inch × 5-inch × 3-inch loaf pan. Place loaf in dish and turn to coat with butter.

Place setting on defrost and time for 4 minutes. Turn loaf over and rotate dish one-fourth turn every $\frac{3}{4}$ minute. Place dish in warm location until double in size. Top of loaf should be about 1 inch below top of dish.

Microwave on medium 10 to 12 minutes, rotating loaf one half-turn after 5 minutes.

1. In judging the appearance, what ratings would you give this loaf of bread? Circle a number.

Low - 1 - 2 - 3 - 4 - 5 - High

2. What comments did your family make? _____

3. What was the texture on the inside of the loaf?

- _____ fine even crumb
- _____ coarse and uneven
- _____ full of air tunnels
- _____ loaf collapsed in baking

4. Did you find baking a frozen loaf convenient?
Yes _____ No _____

Toppings can be applied to the loaf after defrosting and before proofing (rising). Suggested toppings are toasted sesame seeds, cinnamon and sugar, crushed canned onion rings, and taco seasoning mix with cornmeal.

Experiment 10—Yeast Bread

Coating Applied to Loaf

Using a frozen loaf, defrost as in Experiment 9. Coat buttered loaf with one of the toppings mentioned above. Which topping did you use?

1. In judging the appearance, what rating would you give this loaf of bread?

Low - 1 - 2 - 3 - 4 - 5 - High

2. What comments did your family make? _____

3. Did the coating add to or detract from the flavor of the bread?

_____ added to flavor _____ spoiled flavor

4. What was the texture on the inside of the loaf?

- _____ fine even crumb
- _____ coarse and uneven
- _____ full of air tunnels
- _____ loaf collapsed in baking

Experiment 11—Homemade Yeast Breads

Since browning becomes a problem when baking breads, the darker breads can look better and give you the pleasant aroma of homemade breads. The following recipe baked in a 10-inch pie plate is unique in shape and flavor. The recipe makes one loaf. You may use another yeast bread recipe in place of this one.

Oatmeal Wheat Bread*

- | | |
|-----------------------------------|-----------------------------------|
| 1 cup whole wheat flour | 1 packet dry yeast |
| 1/2 cup quick cooking rolled oats | 1/4 cup warm water |
| 1/3 cup dark molasses | 1 1/2 to 2 cups all-purpose flour |
| 3/4 cup water | Cornmeal, milk, rolled oats |

Combine whole wheat flour, oats, molasses and shortening in a mixing bowl. Microwave 3/4 cup water until boiling. Stir into bowl; cook to warm temperature.

Stir yeast into warm water. Blend into warm flour mixture. Stir in flour gradually to make a very stiff dough. Knead on well-floured surface until smooth, about 5 minutes. Return to greased bowl. Cover. Let rise in warm place until doubled in size, about 1 hour. Punch down, shape into ball, let rest for 15 minutes.

Butter a 10-inch pie plate. Sprinkle with cornmeal. Shape dough into a log about 15 inches long. Brush lightly with milk, roll in oats to coat heavily. Shape into a ring and place on cornmeal. Pinch the ends together.

Place a greased glass in center. Let rise in warm place until light, 45 to 60 minutes. Sprinkle lightly with cornmeal.

Microwave at 50 per cent power (medium) 6 minutes, rotating one half-turn after 3 minutes. Change power level to high. Microwave 4 to 6 minutes until top springs back when touched lightly. Let stand 10 minutes. Remove bread; cool on rack.

*Used with permission from Microwave Cooking Library, *Basic Microwaving*.

Your Reactions

1. Outside—firm and smooth?

Yes _____ No _____

(No large cracks. The oatmeal will give a rough appearance.)

2. Interior—fine even grain? Yes _____ No _____

—even color? Yes _____ No _____

(Dark spots may indicate an area of concentrated microwaves that may cause hard, tough spots in the bread.) Did this happen to you?

Yes _____ No _____

3. Flavor—Did you like it? Yes _____ No _____

_____ mild? _____ strong?

_____ appropriate molasses taste?

4. Did anything unusual happen?

Yes _____ No _____

If yes, please explain _____

5. Would you make this bread again?

Yes _____ No _____

6. I did not use the **Oatmeal Wheat Bread** recipe. I substituted:

_____ from _____

Make some comments about your product. _____

7. Did a yeast-bread aroma fill your kitchen as when you bake bread in the conventional oven?

Yes _____ No _____

Experiment 12—Pies

You may choose to do this experiment over a period of time or you can make the crusts, then freeze them for use later. As with cakes and quick breads, pie pastry microwaves rapidly and does not have a chance to brown. The crusts will be very tender and flaky. Roll crust, place into the pie plate, flute edges and prick with fork at the bend of the disk and at 1/2 inch intervals across bottom and sides. Most recipes call for microwaving on high 6 to 7 minutes.

Prepare one plain pie crust recipe. Prepare at least two other pie crusts, using these tips:

- Add to one crust 3-to-4 drops yellow food coloring while mixing.
- Use a "never fail" recipe that calls for one whole egg.
- Prepare your crust and brush it with egg yolk.
- Substitute 1/3 to 1/2 whole wheat flour for white flour.

Your Reactions

1. Were the crusts tender? Yes _____ No _____

If not, what do you think happened? _____

2. Which two tips did you use?

a. _____ b. _____

3. Which is most acceptable as far as appearance?

_____ a. _____ b. _____ plain _____ all three

4. Which has the most acceptable flavor?

_____ a. _____ b. _____ plain _____ all three

5. Is it worth your time and effort to microwave pie crust?

Yes _____ No _____

Experiment 13—Cakes

Not all batters bake well in a microwave oven. Some resources say to reduce the amount of liquid. For best results, follow the package instructions. If you find the texture undesirable, note that in your cookbook, then reduce the liquid slightly next time. Usually moister textures have better quality. Thinner batters produce a moister, open-grained product.

Cakes need to be rotated during cooking. The cake is done when a toothpick inserted near the center comes out clean. If an area on the cake appears to be moist, touch it with your finger to see if the moisture is only on the surface, or if it extends into the cake. If it is only moist on the surface, depend on standing time to dry the spots. If the doughiness extends into the interior of the cake, additional cooking time is needed.

Sometimes the microwave patterns in your oven may prevent the center of the cake from baking. (Refer to Lesson 1 for the heating patterns.) If you continually get a soggy center in your cakes, your alternatives include using a tube pan or making one with a glass and round dish. Another alternative you can try is to invert a saucer on the bottom of your microwave and place the cake container on it. This lifts the product higher into the microwave patterns. It may or may not make a difference.

The use of an 8-inch × 8-inch × 2-inch square dish may require shielding on the corners or on hot spot areas. Shield areas that appear dry. Recipes that call for 8-inch × 12-inch × 2-inch or 9-inch × 13-inch × 2-inch will not rotate one quarter-turn if the oven cavity is not large enough. The result may be a very uneven surface. Divide the batter and bake it in two smaller containers.

After microwaving, allow the cake to stand 5 to 10 minutes before turning out of the pan. Longer standing time will make it difficult to remove.

The pudding-added cake is moist and excellent for microwaving. One package of commercial mix with pudding will yield either two 8-inch round layers plus six cupcakes, two 9-inch round layers, two 8-inch square layers, or 2 1/2 to 3 dozen cupcakes.

Prepare the **Pineapple Upside Down Cake** or any cake recipe that requires fruit on the bottom of the cake dish.

Pineapple Upside Down Cake*

- | | |
|------------------------------|------------------------------------|
| 1/4 cup butter | 1 8 1/4-ounce can pineapple slices |
| 1/3 cup brown sugar (packed) | 4 maraschino cherries, cut in half |

Place butter in 8-inch round dish. Microwave on high 3/4 to 1 minute, to melt. Sprinkle sugar over butter. Drain pineapple (saving liquid). Arrange in dish; decorate with cherries.

- | | |
|-----------------------------|--|
| 1 1/4 cup all-purpose flour | 1 egg |
| 3/4 cup sugar | Liquid from pineapple plus milk to total 1/2 cup |
| 2 teaspoons baking powder | 1 teaspoon vanilla |
| 1/2 teaspoon salt | |
| 1/3 cup soft shortening | |

Place all ingredients in mixer bowl. Beat 3 minutes on lowest speed, scraping bowl often. Spread batter over fruit in dish.

Microwave on high 9 to 12 minutes, rotating dish one half-turn after 5 minutes. Use toothpick to test for doneness. Invert cake onto plate, let dish stand over the cake a few minutes.

*Used with permission from *G.E. Cookbook*.

Your Reactions

1. I used the **Pineapple Upside Down Cake** recipe in this lesson.

Yes _____ No _____

2. I used _____ recipe from _____.

3. Describe overall appearance _____.

4. Describe the texture of the cake _____.

5. Was this a satisfactory dessert for you and your family?

Yes _____ No _____

6. Would you make the recipe again?

Yes _____ No _____

7. Did it bake during the time allotted?

Yes _____ No _____

If no, what changes need to be made?

8. Was it necessary to shield any part of the cake?

Yes _____ No _____

If yes, where was shielding required? (Make a drawing to illustrate.)

Experiment 14—Cake Mixes

Prepare a regular cake mix of your choice according to package instructions or your cookbook instructions.

Do *one* of these things:

● *Either* place one half the batter in an 8-inch round cake dish and the remainder in the square 8-inch by 8-inch dish. (Microwave one layer at a time.) Microwave each on medium or 50 per cent power for 6 minutes and finish at high power 2 to 5 minutes.

● *Or*, place one half the batter in an 8-inch round cake dish and the remainder in a square 8-inch by 8-inch dish (Microwave one layer at a time.), and microwave 3 minutes on medium high and finish on high for 1 to 3 minutes.

● *Or*, prepare two 8-inch round or square cake dishes. Place a trimmed paper towel in the bottom of one, in the other place trimmed waxed paper. Bake one layer at a time beginning with dish with paper towel. Microwave on medium for 6 minutes and complete cooking on high 2 to 5 minutes. Let stand 5 minutes, then invert on plate.

Your Reactions

1. Which dish gave satisfactory results?
_____ round _____ square _____ both

2. Explain any problems you had.

3. Did you find different results with the paper towel than with waxed paper? Yes _____ No _____
Did not work on that. _____

4. Do you find your microwave useful for baking cakes?
Yes _____ No _____

Experiment 15—Cookies

Bar cookies can be easily and successfully microwaved. There are many recipes for all flavors in microwave cookbooks. If brownies are one of your family's favorites, prepare the following recipe. They are chewy, fudgy-style brownies.

One-Dish Scratch Brownies*

½ cup margarine 6 tablespoons cocoa

Place in 8-inch square dish. Microwave on high 1 to 1½ minutes, until margarine melts. Add 1 cup sugar to margarine, stir until smooth. Add the following in order given, and mix well.

1 egg ½ teaspoon baking powder
1 teaspoon vanilla ¼ teaspoon salt
¾ cup flour ½ cup chopped nuts

Microwave 5½ to 6 minutes, rotating one half-turn after 2, 4 and 5 minutes, until top is no longer wet. You may need to shield the corners, or use a 9-inch round dish.

*Used with permission from Litton *Microwave Cooking Library*.

Your Reactions

1. Did you find the brownies acceptable in flavor and appearance?
Yes _____ No _____

2. Did anything happen around the nuts in the brownies? Yes _____ No _____

If yes, describe it _____

3. Were the length of time and the power level suited to your oven?
Yes _____ No _____

If no, what adjustments have to be made? _____

Experiment 16—Drop Cookies

Just to find out what happens to drop cookies in the microwave, prepare one batch of your favorite drop cookies. Make a cookie sheet as described at the beginning of this lesson, or use a microwave baking sheet. Drop dough in a circle on the sheet. Microwave 15 to 20 seconds, rotate the sheet and microwave up to 30 more seconds.

What has happened to the cookies? Are they dry? Are they done? If not, microwave 15 to 20 seconds. Break several cookies open.

Your Reactions

1. Describe the texture _____

2. Did they microwave evenly?
Yes _____ No _____

3. Are there any burned spots?
Yes _____ No _____

Comments

Please write or call your county Extension agent if you would like to share your experiences with this lesson or request other information about breads and cereals.

Experiment 16 - Drop Cookies

Just to find out what happens to drop cookies in the microwave, prepare one batch of your favorite drop cookies. Place a cookie sheet as described in the beginning of this recipe or use a microwave safe sheet. Bake at 350 degrees for 10-12 minutes. What are your observations? Are they done? If not, microwave for 30 seconds. But do not let cookies overcook.

Your Reactions

Describe the texture, color, and appearance of the cookies. Did they rise? How did they rise? Did they spread? How did they spread? All you need to know is that you are a scientist.

Your Reactions

Comments: Please write or call your county Extension agent if you would like to share your experiences with this lesson or request other information about breads and cereals.

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One-Dish Scotch Broth

1. In a large pot, combine 1 cup of water, 1 cup of broth, and 1 cup of rice. Add 1 cup of sugar to maintain the soft texture. Add the following in order given, and mix well.

Your Reactions

Did you find the broths acceptable in flavor and texture? How did they taste? How did they spread? How did they rise? All you need to know is that you are a scientist.

If yes, describe it.

3. Write the length of time and the temperature to your oven.

Yes _____ No _____

If no, what adjustments have to be made?

Experiment 15 - Cookies

Drop cookies can be easily and successfully microwaved. There are many recipes for drop cookies.

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