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The Microwave Connection – Member’s Guide
Michigan State University Cooperative Extension Service
4-H Club Bulletin
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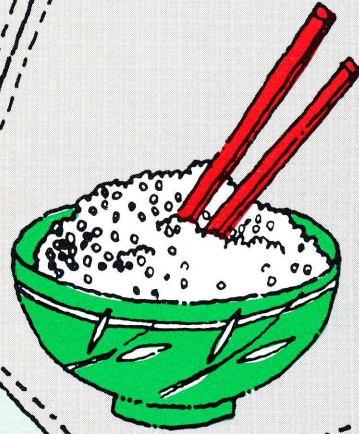
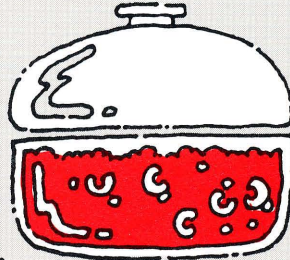
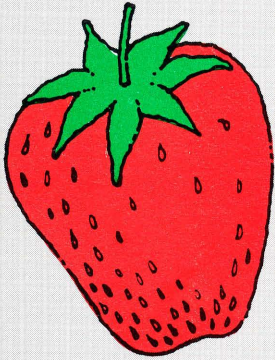
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A 4-H Guide to Healthy and Safe Microwave Cooking

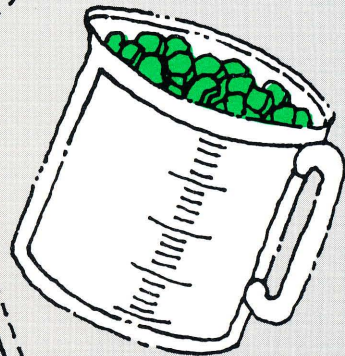
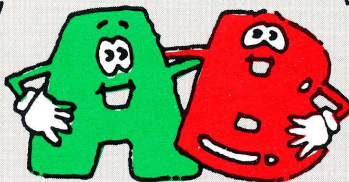
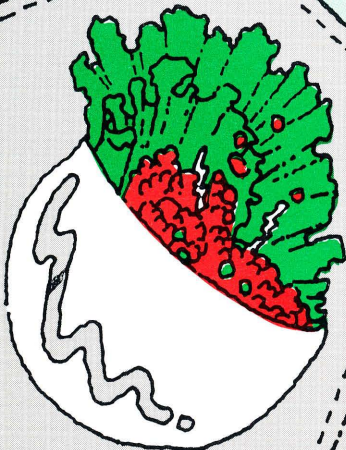
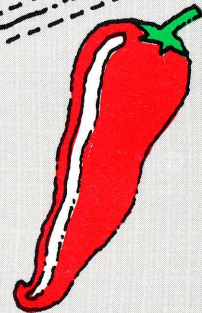
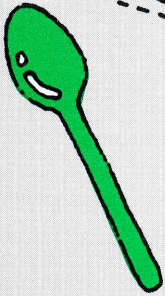
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The Microwave Connection

Member's Guide



Acknowledgments

This bulletin was written by Deanna House, Freelance Home Economist and 4-H Volunteer Leader, with assistance from Patricia A. Hamerschmidt, Program Leader for Food, Nutrition and Fitness, 4-H Youth Programs, and Ruth Eggert Linne-
mann, Program Leader, 4-H Youth Programs. Amy Riley, former 4-H Youth Programs Graduate Assistant, assisted with the revision.

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*NOTE: Answers to the puzzles in this manual can be found *on page 42.*

Let's Get Started

Microwave cooking is a fun way to help you connect tasty, speedy, penny-wise foods to happy, healthy eating. All you need is a willingness to be creative and the enthusiasm to experiment. Are you ready? Let's go...

How do you fit into the microwave world? Check where you have used a microwave oven:

- At home
- At a friend's or relative's home
- At school
- At a "quick" food store
- At another place

Even if you have never turned on a microwave oven, this 4-H project will help you quickly learn the basics of microwave cooking. You will discover that the more you know about **how a microwave oven works**, the easier it will be to understand **how foods cook in a microwave**.

There is a big difference between microwave cooking and regular cooking. When you cook food in or on a range, the heat comes from an electric coil or from a gas burner. The heat warms the pan before it warms the food. When you cook in a microwave, the liquid and fat molecules in the food rub against each other and produce heat very quickly within the food. The container merely holds the food, it doesn't help to heat the food.

When cooking in a microwave, you usually cook by time. This means that you turn a dial or touch a pad to indicate the seconds or minutes a food should cook. **Because this type of cooking is so fast, you should always start with the minimum time given in a recipe.** You can add extra time, if needed.

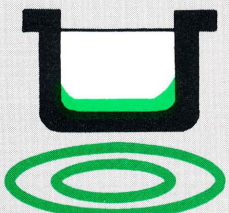

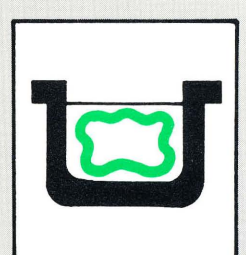
Look at the microwave oven that you are using. Answer these questions to help you understand your oven better:

- | | YES | NO |
|---|--------------------------|--------------------------|
| • Do you see any type of dial? | <input type="checkbox"/> | <input type="checkbox"/> |
| • Do you see a touch pad that contains numbers? | <input type="checkbox"/> | <input type="checkbox"/> |
| • Can you find a pad or spot with the word "start"? | <input type="checkbox"/> | <input type="checkbox"/> |
| • Is there a button that turns the inside light on and off? | <input type="checkbox"/> | <input type="checkbox"/> |
| • Does the oven have a clock? | <input type="checkbox"/> | <input type="checkbox"/> |

One way to feel confident about cooking in a microwave is to get into action and do it! As you prepare the recipes in this guide, you will learn more about how to use a microwave oven. Let's begin with super snacks that not only taste good, but are good for you.

Remember to follow these good habits every time you get ready to cook:

- Wash your hands.
- Protect your clothes with an apron if you want.
- Make sure your hair will not get into the food.
- Read all recipe directions.
- Gather supplies and equipment before you start cooking.
- Always have pot holders available.
- Remember to measure carefully.
- Always leave the kitchen clean.

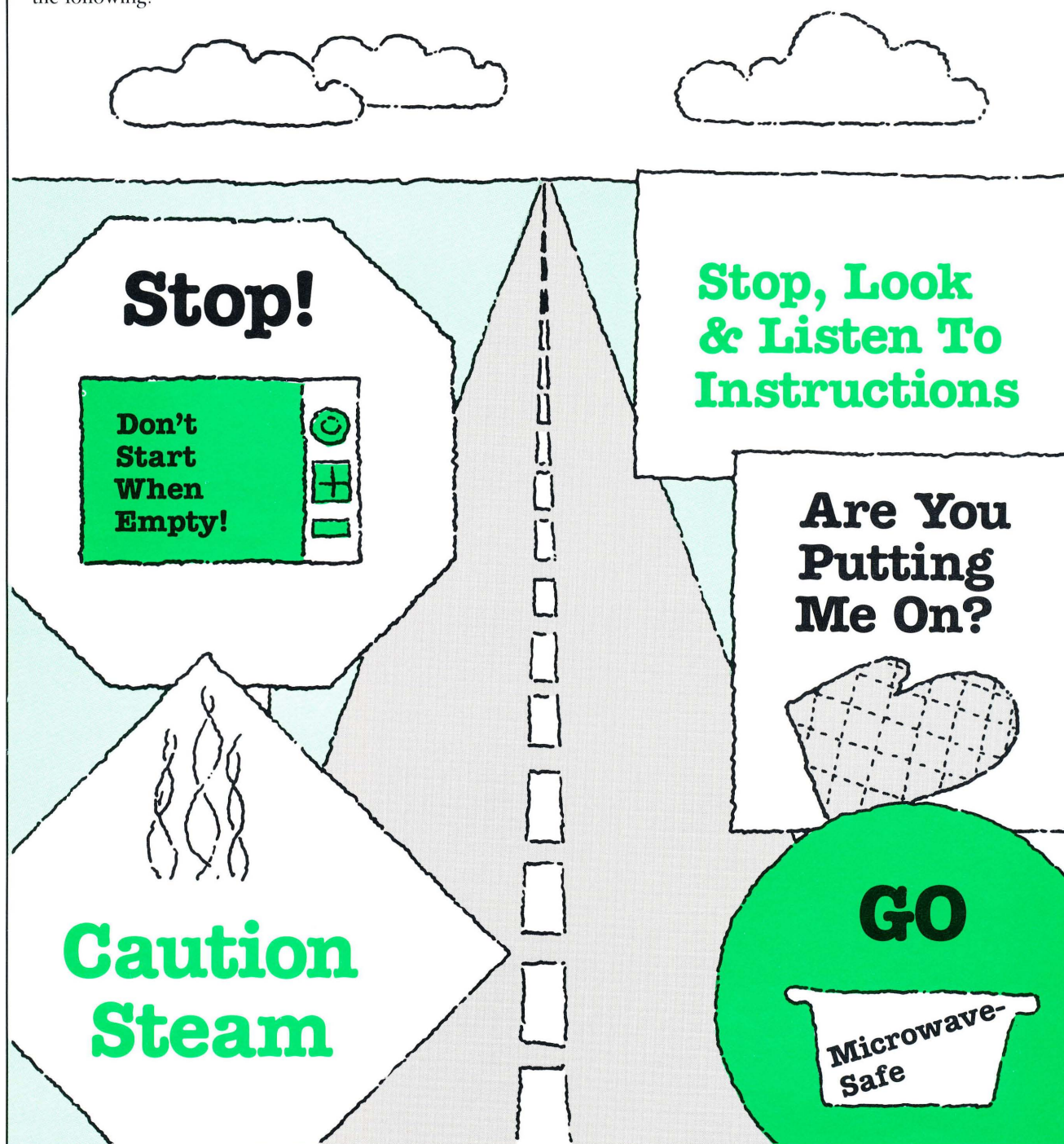
Range Top	Regular Oven	Microwave Oven
		
<p>Food cooks in a pan on the range top when the pan is put on a hot burner.</p>	<p>Food cooks or bakes in a hot oven from the heat that is in the air in the oven.</p>	<p>Food cooks when microwave energy makes the moisture molecules in the food move back and forth very quickly. This movement causes friction, which produces heat, which in turn cooks the food.</p>

Rules of the Road

Learning to cook is like learning to drive a car. There are several rules of the road you will need to know before getting started in order to have a fun and safe trip. In microwave cooking, these rules include the following:

- Do not start the microwave oven when it's empty.
- Use microwave-safe dishes. Do not use metal in a microwave.
- Be careful of steam when removing coverings.
- Always use pot holders.
- Read and use the "Use and Care Guide" that comes with a microwave oven.

Many of these rules will be talked about in more detail in this book.



Snacks in a Snap

Snacks are a favorite part of nearly everyone's daily diet. They can be good for you if you eat snacks that give your body the nutrients it needs to keep you going and growing.

When you choose snacks, remember that some foods, especially very sweet sticky ones, can hurt your teeth when eaten often. Put a check next to the smart, nutrient-rich snacks **you** like to eat:

- raw vegetables
- cheeses
- fresh fruits

- fruit juices without added sugar
- yogurt
- lowfat milk and milkshakes
- bread, muffins, tortillas or crackers
- meat, fish or leftover chicken
- beans
- pizza
- peanut butter

A microwave oven can help you "snack smart" in a snap. Try the recipes in this section for your next snack attack.

RECIPE

Pizza Snacks (makes 1 serving)

You need:

- bread product like English muffin, melba toast or other firm crackers
- pizza sauce
- slices of mushrooms, green peppers, onions or other vegetables
- squares of mozzarella cheese or shredded mozzarella cheese

Equipment:

- small microwave-safe plate
- table knife

1. Place the bread product for four pizza snacks on a microwave-safe plate. If you are using English muffins cut each half into four pieces.*

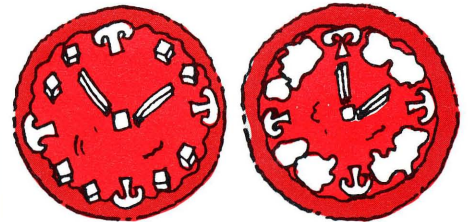
2. Spread each piece with a small amount of pizza sauce.

3. Top with the vegetables and cheese.

4. Microwave on 100% power for 15 seconds. Check to see if the cheese is melted. If it's not, microwave again for 15 seconds or until melted.

*You might like to toast the English muffin half before cutting it.

Nutrients: vitamin A, B vitamins, vitamin C, calcium, iron, carbohydrates, fat, protein



A Timely Reminder

One important point to remember is that the length of time it takes to cook a food depends on how much food is in the microwave oven. The simple rule is that the larger the quantity, the longer it takes to cook. For example, it will take longer to cook eight pizza snacks than it would to cook two pizza snacks. Try the following:

- 1.** Cook two pizza snacks on a plate. How many seconds did it take for the cheese to melt? _____
- 2.** Now cook eight pizza snacks on a plate. How many seconds did it take for the cheese to melt? _____
- 3.** Which took longer? _____
Why? _____

RECIPE

Chili Dip (makes 6 servings)

You need:

- 1 can (16 ounces) refried beans
- 1/2 cup shredded Monterey Jack or other favorite cheese
- 2 tablespoons taco sauce
- 1 tablespoon milk
- 1/2 teaspoon chili powder
- crunchy vegetables like carrot and celery sticks and green pepper strips

Equipment:

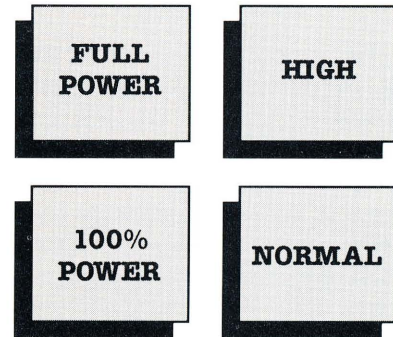
- 2-quart microwave-safe casserole or bowl
- can opener
- rubber scraper
- dry measuring cups
- measuring spoons
- wooden spoon for stirring
- serving dish and plate
- paring knife
- cutting board

1. Mix the refried beans, cheese, taco sauce, milk and chili powder in the 2-quart microwave-safe casserole.
2. Microwave on 100% power for 1 minute. Stir with a wooden spoon.
3. Continue to cook on 100% power in 1-minute segments, stirring after each minute, until the mixture is hot. This will take 3-5 minutes.
4. Serve with the crunchy vegetables.

Nutrients: vitamin A, B vitamins, vitamin C, calcium, carbohydrates, fiber, protein



These words often mean the same:



In this 4-H guide, the term 100% power will be used.

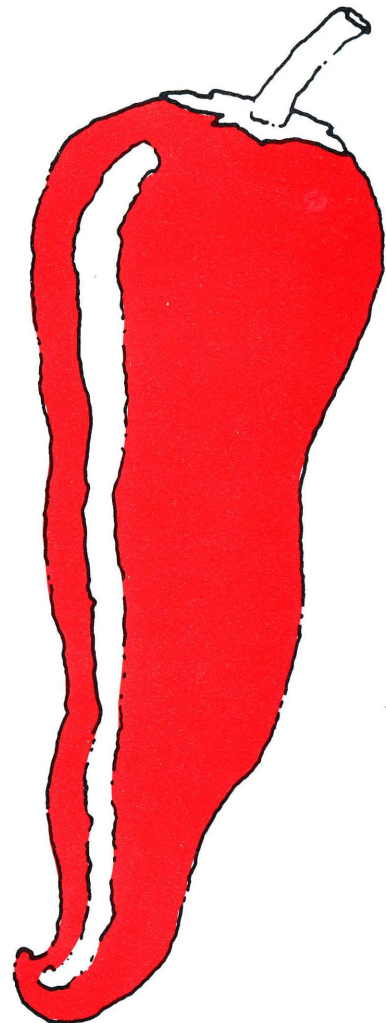
What Is Microwave-Safe?

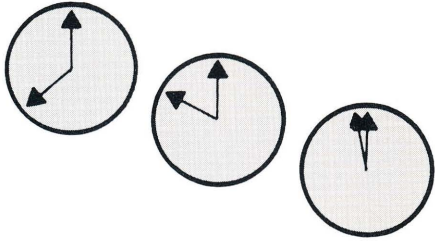
Glass, some plastics, most pottery and some paper make good microwave utensils. That's because they allow microwave energy to pass through them as light passes through a window. Be careful though! Paper can char or burn if it is used to heat foods for more than 5 minutes. Plastics that are not labeled microwave-safe may melt and should not be used.

Microwave utensils can become hot, but the heat comes from the food, not the microwave energy. Always be sure to have pot holders available.

See page 29 for a way to test your dishes to see if they are microwave-safe.

Microwaves bounce off metal, causing unevenly cooked foods. **Do not** use metal utensils when cooking in the microwave oven.

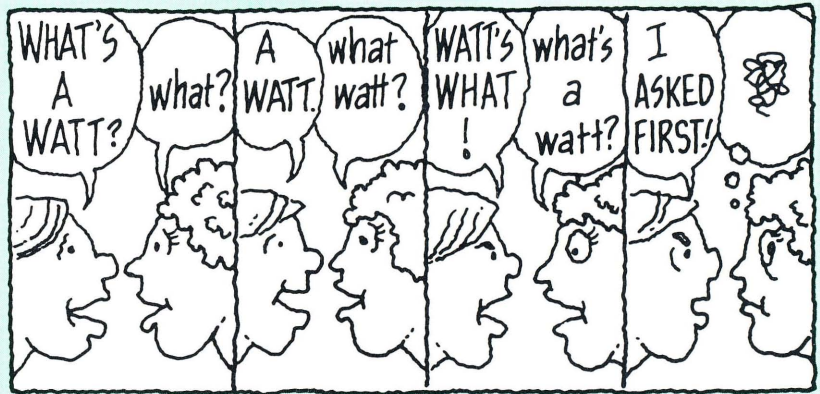




Time's Up

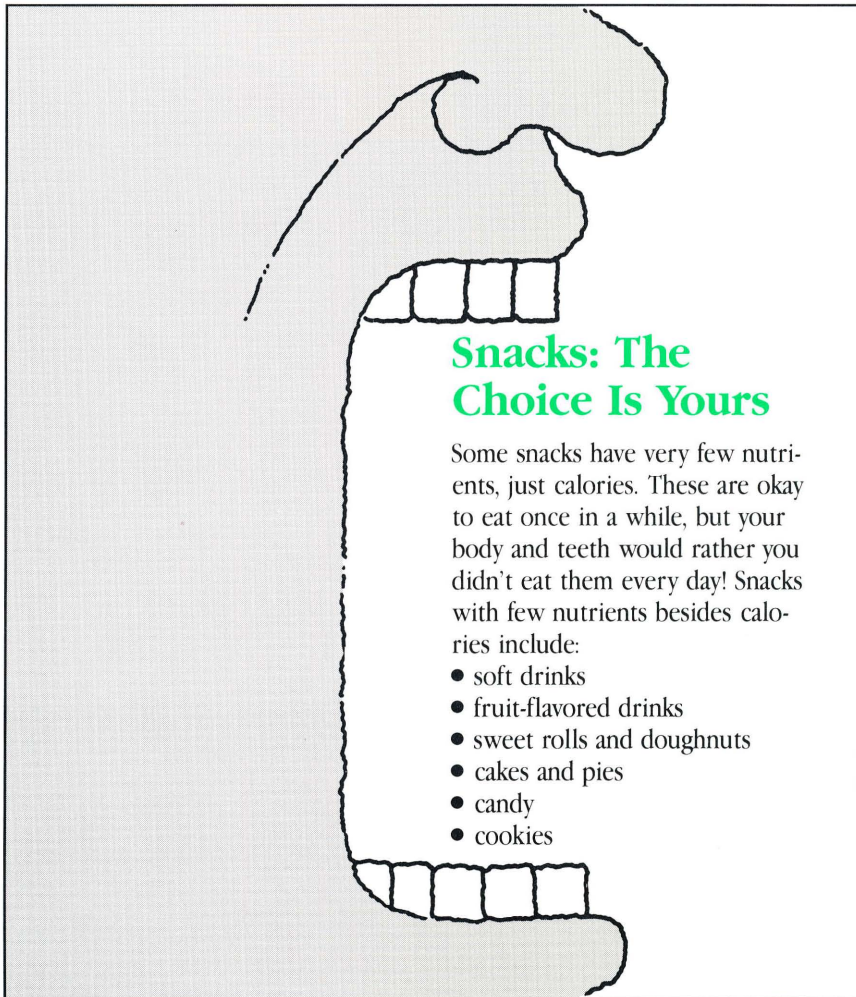
All microwave ovens work in the same way, but they do differ in maximum **cooking wattage**. This can make foods cook faster or more slowly than the time given in the recipe directions. The recipes in this 4-H manual were tested in ovens with 625-700 watts. If foods cooked in the microwave you are using are not done in the suggested time, don't worry. Just add a little extra time. Make a quick note beside the recipe to remind you to adjust the recipe timing every time you prepare it.

What's a Watt?



“Watt” and “wattage” are words used to measure power. Think of something you use every day that measures power in watts. A light bulb is one answer! The higher the wattage, the more light given off.

Similarly, in a microwave oven, the higher the number of watts, the faster the cooking. Lower wattage ovens cook just as well but may simply take a little longer.



Snacks: The Choice Is Yours

Some snacks have very few nutrients, just calories. These are okay to eat once in a while, but your body and teeth would rather you didn't eat them every day! Snacks with few nutrients besides calories include:

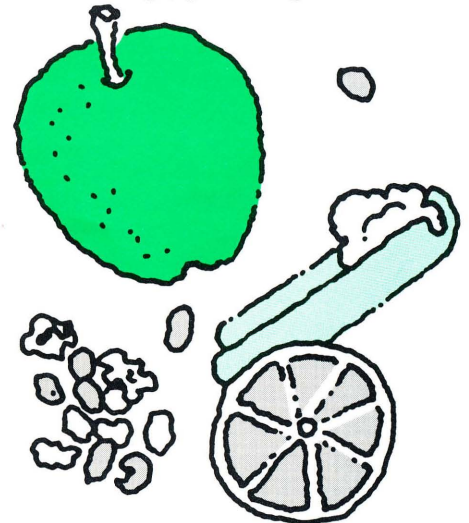
- soft drinks
- fruit-flavored drinks
- sweet rolls and doughnuts
- cakes and pies
- candy
- cookies

SNACK SMART!

Every single day, you do a little growing, and food is the fuel that keeps you going!

Nutrients are important. They play a big part—especially if you learn the way to snack smart!

So choose your snacks wisely! You can, don't you know? Eat a variety of foods to go, glow and grow!



RECIPE

Apple Warm-Up (makes 1 serving)

You need:

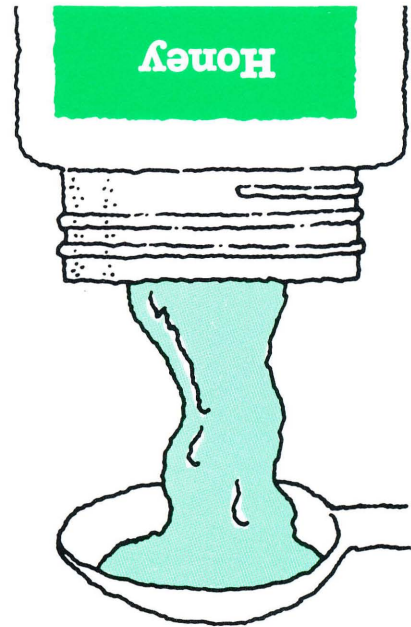
- 1 medium apple
- 1 teaspoon honey
- dash of ground cinnamon

Equipment:

- paring knife
- cutting board
- custard cup or small microwave-safe bowl
- measuring spoons

1. Wash the apple and cut it (unpeeled) into four pieces. Remove the core.
2. Cut each piece in half to make eight apple slices.
3. Place the pieces in a microwave-safe custard cup or small bowl.
4. Drizzle with honey. Sprinkle with cinnamon.
5. Microwave on 100% power for 2 minutes. Check to see if the apple is just about tender. If the apple is still firm, microwave on 100% power for 30-45 more seconds. Serve warm or cold.

Nutrients: vitamin C, carbohydrates, fiber

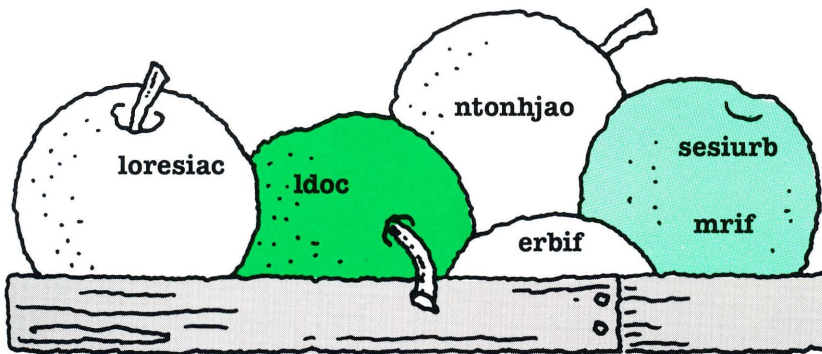


When honey gets too thick, remove the lid from the jar and microwave the jar on 100% power for a few seconds until the honey gets thinner. Be careful not to overheat.

All About Apples

Unscramble the words in the apples. Use the unscrambled words to fill in the sentences below.

- Choose _____ apples with no _____.
- Apples are a good source of _____.
- Apples are also low in _____, with only 80 in a medium-sized one.
- Keep apples _____ to keep them crunchy.
- A favorite variety of apples is _____.



Apple varieties that 4-H'ers like for apple warm-ups are:

- Rome beauty
- Jonathon
- Ida red
- Golden delicious

What is your favorite variety of apple?

Check Point: Snacks in a Snap

Did you

- follow good habits in getting ready to cook?
- learn **how** foods cook in a microwave?
- eat nutrient-rich snacks this week? Name them. _____

What was your favorite "Snack in a Snap"? _____

Why do foods take longer to cook in some microwave ovens than in other microwave ovens? _____

Why do 10 pizza snacks take longer to cook than 5 pizza snacks? _____

Give Breakfast a Running Start

Breakfast is a very important meal. By eating a nutritious breakfast, you can get a running start to help you tackle your busy day.

Since you probably haven't eaten for 10 or 12 hours, you need a nutritious breakfast to resupply your body with energy. Without food in the morning, you will feel run down by mid-morning and won't be able to do as well at school or at play.

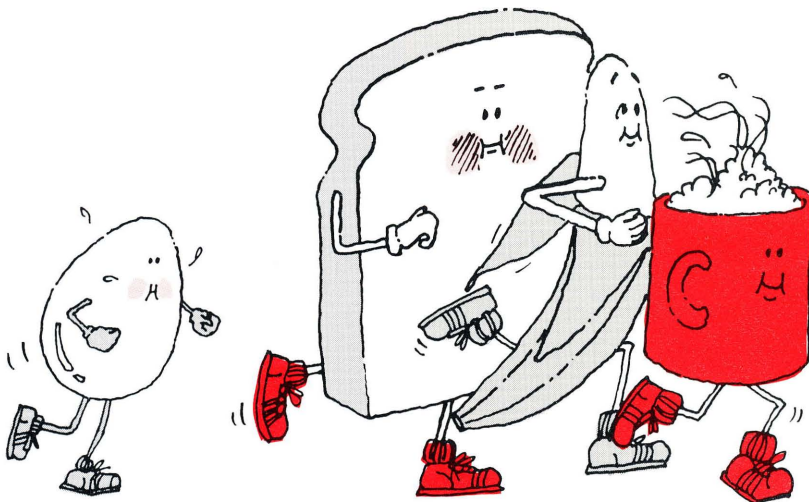
If you are trying to lose weight, skipping breakfast won't help. People who don't eat breakfast are more likely to eat too much at lunch or be tempted by high-calorie snacks!

Is your excuse for not eating breakfast that you have no time? Because microwave cooking is so quick, it is the perfect helper when

you want fast and easy breakfast-making. All you need are some trusted recipes, the suggested ingredients and a little organization of time and energy. Remember it takes time to eat and clean up, too.

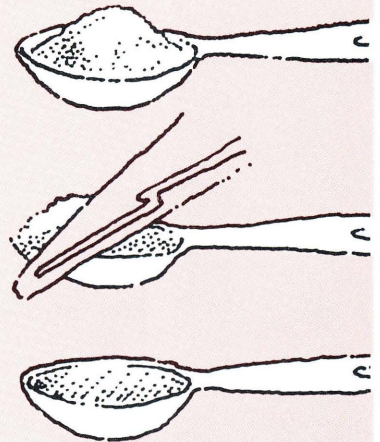
You say you don't like breakfast kinds of foods? Your morning meal doesn't **have** to include traditional breakfast foods. A microwave can be a help here, too, for reheating last night's pizza or leftover casserole.

So give your body a running start with breakfast! See if you can prepare your favorite choices in the microwave.



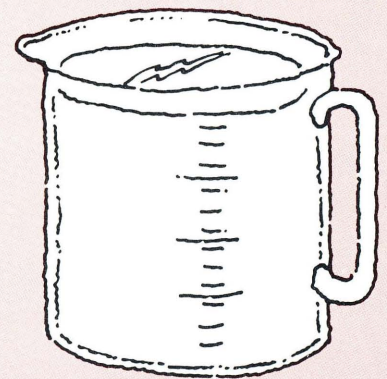
A Measurable Reminder

Accurate measuring in microwave cooking connects just the right amount of an ingredient to the tested recipe.



To measure dry ingredients:

Use a dry measuring cup or spoon exactly the size you need. Put the ingredient into the cup or spoon, then level it off with a narrow metal spatula or the flat side of a table knife.



To measure liquid ingredients:

Put a glass measuring cup on a level surface and bend down so your eyes are even with the measurement mark you need. Carefully pour in the liquid until it reaches the mark. To measure a liquid in a measuring spoon, fill the spoon to the top.

RECIPE

Jiffy Breakfast (makes 1 serving)

You need:

- cooking spray
- 1 slice fully cooked ham or Canadian bacon
- 1 egg
- pepper to taste
- 1-2 tablespoons shredded cheese or 1 slice cheese
- 1 slice bread, toasted

Equipment:

- 6-ounce custard cup or coffee cup
- fork
- measuring spoons
- plastic wrap

1. Lightly spray one 6-ounce cup. Press one slice of meat in the bottom to form a cup.
2. Break the egg on top of the meat. Pierce the yolk gently once with fork tines. If you don't pierce the yolk, the egg will explode! Season it with pepper.
3. Top the egg with cheese.
4. Cover the custard cup tightly with plastic wrap that is vented. The plastic wrap should not touch the food.
5. Microwave on 100% power for 1½-2 minutes.
6. Let stand, covered, 2-3 minutes until the yolk is set throughout.
7. Place the egg and meat on top of toast.
8. Enjoy with a glass of orange juice or ice-cold milk.

Nutrients: B vitamins, calcium, iron, carbohydrates, fat, protein

Minimum Time

It is important to be careful when setting time in microwave cooking. Always start with the shortest time given in a recipe. It is easy to add extra time if the food needs more cooking, but you cannot subtract time from overcooked food! Also, remember that foods may cook faster or more slowly than the time given in recipe directions since different types of microwave ovens vary in maximum cooking wattage. Review "Time's Up" on page 8 for more information.

Standing Time

Sometimes you see the words **standing time** or **carry-over cooking** in microwave recipes. This means that some cooking will continue inside the food after the microwave oven has been shut off. This carry-over cooking can even take place when the food is **removed** from the oven. Keep your eyes open for these two new terms.

The Great Cover-Up

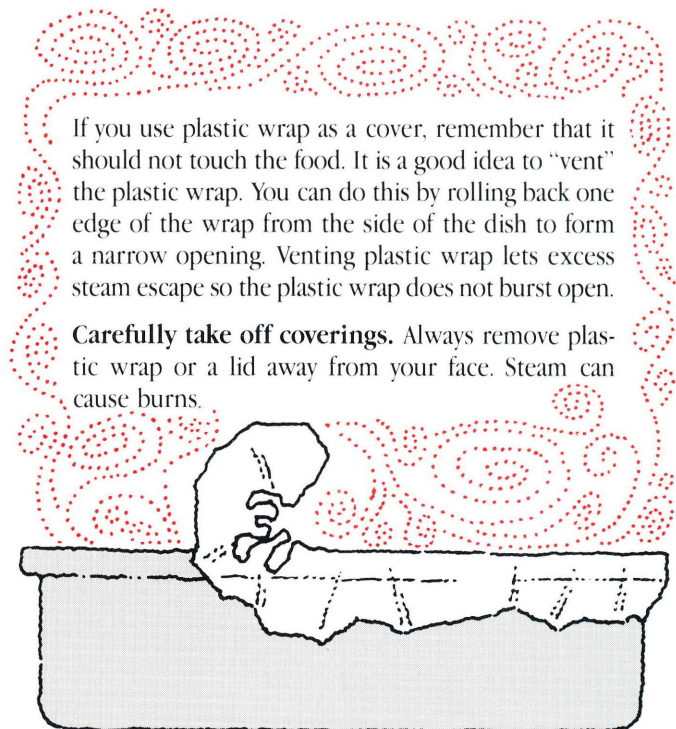
Sometimes microwave chefs wonder when they should cover foods cooking in the microwave. A good rule to follow is to cover foods only when the directions say to cover them.

There are four types of coverings:

1. Glass lid . . . holds in the most heat and moisture.
2. Waxed paper or other nonstick cooking paper . . . holds in some heat, but not steam.
3. Plastic wrap . . . holds in lots of heat and moisture.
4. Paper toweling . . . helps prevent spattering.

When choosing a cover for food that will be cooked in the microwave, it's a good idea to cover food with glass or microwave-safe covers. You can use plastic wrap to cover the cooking dish, but the plastic wrap should not touch the food.

Be aware . . . the covering you use will make a difference in the cooking time and the texture of the finished food.



If you use plastic wrap as a cover, remember that it should not touch the food. It is a good idea to "vent" the plastic wrap. You can do this by rolling back one edge of the wrap from the side of the dish to form a narrow opening. Venting plastic wrap lets excess steam escape so the plastic wrap does not burst open.

Carefully take off coverings. Always remove plastic wrap or a lid away from your face. Steam can cause burns.

RECIPE

Monkey Bran Muffins

(makes about 1 dozen muffins)

You need:

- | | |
|---|--|
| <input type="checkbox"/> 1 cup all-bran cereal | <input type="checkbox"/> 1 cup unsifted flour |
| <input type="checkbox"/> 1 cup buttermilk or sour milk ¹ | <input type="checkbox"/> 1 teaspoon baking soda |
| <input type="checkbox"/> 1/3 cup cooking oil | <input type="checkbox"/> 1/4 teaspoon salt |
| <input type="checkbox"/> 1/2 cup brown sugar | <input type="checkbox"/> 1 banana, sliced into 12 pieces |
| <input type="checkbox"/> 1 egg | |

Equipment:

- | | |
|---|---|
| <input type="checkbox"/> dry and liquid measuring cups | <input type="checkbox"/> custard cups, coffee cups, baking collar ² , or microwave-safe muffin pan |
| <input type="checkbox"/> measuring spoons | <input type="checkbox"/> paper baking cups |
| <input type="checkbox"/> mixing bowl | <input type="checkbox"/> pot holders |
| <input type="checkbox"/> wooden spoon or spatula for stirring | <input type="checkbox"/> cooling rack |

1. In the mixing bowl combine the cereal, buttermilk or sour milk, and oil. Let stand 5 minutes to soften the cereal.
2. Stir in the brown sugar, then beat in the egg. Add the flour, the baking soda and the salt; stir just until the dry ingredients are moistened.

3. Put paper baking cups into the custard cups, coffee cups, baking collars or microwave-safe muffin pan. Spoon batter into cups so the cups are only one-third full.

4. Place one banana slice on the batter in each cup.

5. Place another spoonful of batter on top of the banana slice. Fill cups about two-thirds full.

6. If you wish, sprinkle your muffin with any combination of cinnamon, nuts and brown sugar before microwaving. Microwave on 100% power until no longer doughy, rotating cup one-half turn after half the cooking time. Cook for a total of:

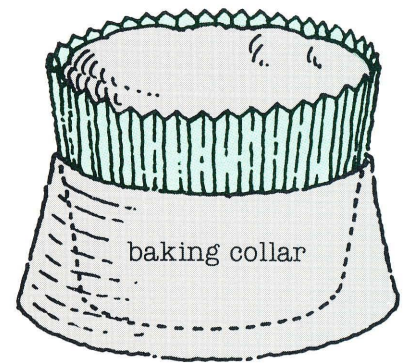
- | | |
|-------------------------|-----------------------|
| 1 muffin—30-50 seconds | 3 muffins—1-2 minutes |
| 2 muffins—45-70 seconds | 6 muffins—2-3 minutes |

Don't overbake your muffins! Muffins are done when the center of the muffin springs back when lightly touched. Or, use a toothpick to scrape away the top from a wet-looking patch on the muffin. The muffin should be dry underneath. Your muffin is done even though the edges may look slightly shiny and spongy!

7. Remove the muffins from the microwave immediately (if you used a baking collar, lift the collar over the muffin right after it comes out of the microwave). Place the muffins on the cooling rack. Let the muffins carry-over cook for 2 minutes.

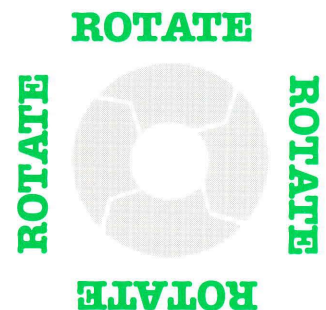
8. Serve the muffins warm. Be careful—the banana will be **hot!**

Nutrients: B vitamins, iron, carbohydrates, fiber, fat



¹To make sour milk, put 1 tablespoon vinegar or lemon juice in the bottom of a liquid measuring cup. Fill to 1 cup mark with milk.

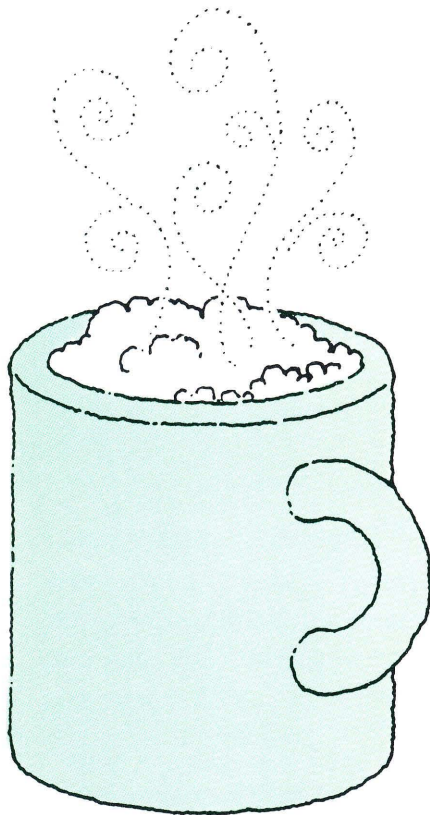
²To make baking collars, cut the top inch off a Styrofoam or nonwaxy paper cup. The top portion is your collar! Place a paper cupcake cup inside this ring, and set it on a paper plate.



Have you ever read or heard the word **rotate** in connection with microwave cooking? To rotate means to turn the entire filled dish one-quarter to one-half turn to help the food cook more evenly.

To rotate one-quarter turn, turn the dish until the side which was to the back of the oven is to the side. To rotate one-half turn, turn the dish until the side which was to the back of the oven is to the front.

Inspect the food as it is cooking. If one area appears to be getting more done than another, rotate the dish. Rotating is usually done halfway through the total cooking time.



RECIPE

Microwave Hot Chocolate Mix

(makes 2 cups)

You need:

- 1³/₄ cups instant nonfat dry milk powder
- 1/4 cup sugar
- 1/4 cup unsweetened cocoa powder

Equipment:

- bowl
- dry measuring cups
- spoon for stirring
- covered container for storing hot chocolate mix
- microwave-safe mug

1. Combine the nonfat dry milk powder, sugar and cocoa in a mixing bowl. Stir until well mixed.
2. Now you are ready to make hot chocolate or you can store the mixture in a covered container.

To make one cup of hot chocolate:

1. Fill a microwave-safe mug ³/₄ full with water.
2. Microwave on 100% power for 2 minutes.
3. Gently stir ¹/₃ cup microwave hot chocolate mix into the hot water.
4. It's ready to taste. Be careful though. It will be very hot!

Nutrients: B vitamins, carbohydrates, protein

RECIPE

Banana Split Oatmeal

(makes 1 serving)

You need:

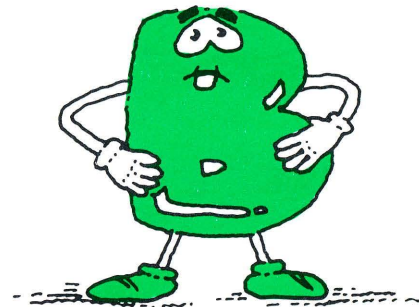
- 1/3 cup quick-cooking oatmeal
- 1/8 teaspoon salt, if desired
- 3/4 cup very hot tap water
- 1/2 banana, sliced
- 1/2 cup strawberry, chocolate or vanilla frozen yogurt or ice milk

Equipment:

- dry and liquid measuring cups
- measuring spoons
- 2- to 3-cup microwave-safe cereal bowl
- wooden spoon for stirring
- table knife
- ice cream scoop

1. In a microwave-safe cereal bowl, mix together the oatmeal and salt.
2. Stir in water. Microwave on 100% power for 1 minute. Stir.
3. Microwave on 100% power for another minute. Stir. Microwave an additional 30-60 seconds on 100% power until the cereal reaches the desired thickness. Stir again.
4. Top with banana slices and frozen yogurt or ice milk.

Nutrients: B vitamins, vitamin C, calcium, carbohydrates, fiber, protein



Thiamine, riboflavin and niacin are three of the vitamins called B. They help body cells break down fat, carbohydrate and protein for energy!

Beans, meats and enriched cereals, plus breads that contain whole grain Give you the B vitamins you need to feel your best—not drained.

These foods also contain fiber which helps rid your body of waste. So these foods not only do a job, there's a bonus—they have great taste!

Fill in your reply to Breakfast-Skipper Sam's letter.

Dear 4-H member:

Do I really **have** to eat breakfast? I'd rather sleep an extra 10 minutes than take time to make and eat something. And anyway, I'm trying to lose weight so I skip breakfast. Is this okay?

Signed,
Breakfast-Skipper Sam



Dear Breakfast-Skipper Sam:

Cereal Search

Cereal is a popular quick-to-fix breakfast food. It is also a good source of carbohydrates for energy and fiber to help food move through your body. Find ten words hidden in the puzzle that have something to do with cereal. The words can go across, backward, up, down or diagonally. These are the words you are searching for:

O	T	E	F	R	D	O	P	G
A	R	Y	I	Z	N	L	T	A
T	L	R	S	N	E	R	O	M
S	E	K	A	L	F	Q	H	C
M	P	R	S	A	I	J	N	O
R	B	D	F	K	B	E	Y	R
D	A	R	T	A	E	H	W	N
Z	C	I	B	A	R	L	E	Y

OATS	WHEAT	BARLEY
RYE	HOT	COLD
BRAN	FLAKES	CORN
FIBER		

Check Point: Give Breakfast a Running Start

Did you

- use a covering when preparing any of these foods? Which recipe(s) called for covering?

- rotate foods during cooking? Why?

- eat breakfast every day this week? Why is breakfast an important meal?

Which recipe would you like to make again? _____

Lunch Break

Lunch provides a mid-day break and a chance to refuel your body with healthy foods that have the nutrients you need.

When selecting lunch foods, choose a variety of foods from each of the food types: milk and cheese; meat, poultry, fish and beans; breads and cereals; fruits and vegetables. You shouldn't eat foods that are mostly fats and sweets too often.

One popular lunch option is to reheat leftovers in the microwave oven. There may be a microwave at school or at an after-school job where you can quickly heat foods brought from home. If you're using a microwave oven to reheat leftovers, remember these tips:

- Lower wattage microwave ovens may take longer to heat foods. Reheating reminders can be found on page 34.
- Be careful of steam that may build up—especially with plastic wraps. Steam can cause burns!
- If you pack a food in foil, be sure to remove the foil before putting the food in the microwave.
- Keep the microwave clean for the next person to use. Wipe spills with a damp paper towel or cloth.

Be Safe, Not Sorry!

When cooking chicken and other meats, there are certain rules you should follow to make sure food is safe to eat. Bacteria can grow in foods that aren't handled properly, and this can make people sick. Here are a few special tips to follow when preparing chicken or other meats:

- Wash your hands with soap and hot water before and after handling raw chicken or other meats

and before you touch other foods. This prevents bacteria from spreading.

- After you've used knives, cutting boards or other utensils with raw chicken or other meats, be sure to scrub them with soap and water. Clean the sink, too!
- Be sure to cook the chicken thoroughly. Make sure you keep it hot (above 140°F) until serving time. Bacteria grow very fast at room temperature.

Fast Food Quiz

Fast food restaurants are convenient, but a steady diet of hamburgers, fried fish and chicken, french fries and milkshakes is too high in fat and salt to be healthy. Why not try the lowfat chicken nuggets featured in this section? They're quick and easy, and much lower in fat and salt than the chicken pieces featured in many fast food restaurants.

When you do eat at a fast food restaurant, remember that the way a food is made can make a big difference in its fat content. Baked, broiled or grilled foods are usually lower in fat than fried foods. For practice in picking lower fat foods, circle the lower fat choice in each of the following food pairs.

French fries

Fried chicken sandwich

Regular hamburger

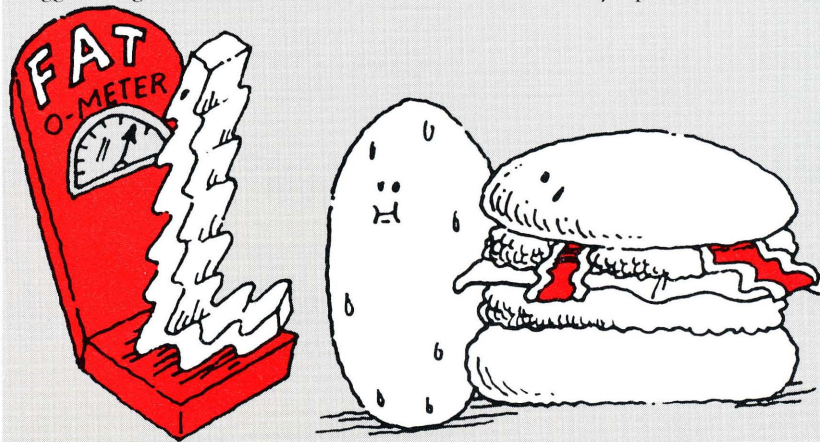
Egg, sausage and cheese biscuit

Plain baked potato

Grilled chicken sandwich

Bacon double cheeseburger

Pancakes with syrup



RECIPE

Chunky Cheese Soup

(makes 4 servings)

You need:

- | | |
|--|---|
| <input type="checkbox"/> 1/2 cup water | <input type="checkbox"/> 2 cups (16-ounce can) cream-style corn |
| <input type="checkbox"/> 1 cup sliced carrots | <input type="checkbox"/> 1 1/2 cups milk |
| <input type="checkbox"/> 1 cup chopped celery | <input type="checkbox"/> 2/3 cup grated or cubed cheddar cheese |
| <input type="checkbox"/> 1 teaspoon salt | |
| <input type="checkbox"/> 1/8 teaspoon pepper | |
| <input type="checkbox"/> 2 cups diced potatoes | |

Equipment:

- | | |
|--|---|
| <input type="checkbox"/> dry and liquid measuring cups | <input type="checkbox"/> 3-quart microwave-safe casserole (with lid if available) |
| <input type="checkbox"/> paring knife | <input type="checkbox"/> wooden spoon for stirring |
| <input type="checkbox"/> cutting board | |
| <input type="checkbox"/> measuring spoons | |

1. Put the water, carrots, celery, salt and pepper in the 3-quart microwave-safe casserole. Cover with a lid or plastic wrap that is vented. The plastic wrap should not touch the food.
2. Microwave on 100% power for 4 minutes. Stir. Add potatoes. Recover and microwave for 3 minutes on 100% power. Stir. Recover and microwave an additional 3 minutes on 100% power.
3. Stir in corn. Recover. Microwave on 100% power for 1 1/2 minutes. Stir. Recover and microwave on 100% power for 1 1/2 minutes.
4. Add milk and cheese. Recover. Microwave for 2 1/2 minutes on 100% power, stirring once until the soup is hot and the cheese melts.
5. Ladle into soup bowls or cups.

Nutrients: vitamin A, B vitamins, vitamin C, calcium, carbohydrates, fiber, protein

In a Stir

Many, many times in microwave cooking the directions say, "stir." Have you ever wondered why?

Stirring helps to even the temperature in food and shortens the cooking time. Since microwave energy cooks from all directions, you should stir from the outside to the center of the dish. Ovens vary in the amount of stirring needed, but all cook more evenly with occasional stirring.

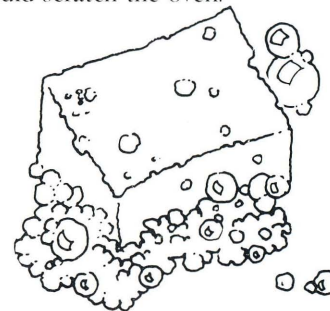
In recipes like chocolate pudding, stirring helps to evenly distribute cornstarch, which makes the pudding thicken. Sometimes in things like gravy, the thickening ingredient that needs stirring is flour.

What recipes have you made in the microwave oven that needed stirring? List them.

Keep It Clean

Keep your oven **clean**. Wipe the oven with a damp, soapy cloth after using. Microwave ovens clean very easily after each use. However, cooked-on food needs special attention.

If spattered food is hard to remove, heat one cup of water in the microwave oven until the water steams. This will often soften the food so that it will easily wipe clean. Use a nylon net or nylon scrubber, if necessary, but **never** use anything that would scratch the oven.



NUTRITION-TIP

Are you watching your calories? Use skim or 2% milk instead of whole milk for this recipe.
Whole milk, 1 cup—about 150 calories and 10 grams of fat
2 percent milk, 1 cup—about 130 calories and 5 grams of fat
Skim milk, 1 cup—about 90 calories and 0 grams of fat

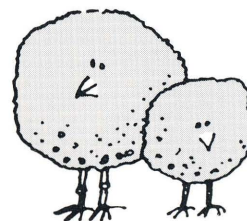
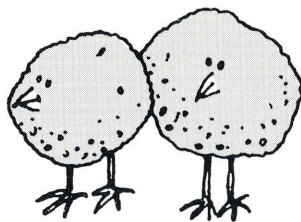
STOP!

All microwave ovens stop running as soon as you open the door. On some microwave ovens, you need to first push the pad that says "stop." You are the person in charge.

Hot Dogs—Should I or Shouldn't I?

Q. Hot dogs are easy to make in the microwave. Are they bad for me to have for lunch?

A. That depends on how often you eat hot dogs. It's true that most hot dogs are high in fat and salt. Eating too many foods high in fat and salt can be harmful to your health. But if eaten only occasionally, foods like hot dogs can help make a meal interesting and enjoyable. Just be sure to eat a variety of foods every day to get all the nutrients your body needs. Don't overuse any one food.



RECIPE

Chicken Nuggets

(makes 25-30 nuggets)

You need:

- 1 pound skinned and boned chicken breast or thigh meat (turkey could also be used)
- 3 tablespoons milk
- 1/4 cup grated Parmesan cheese
- 1/4 cup dry bread crumbs
- 1/2 teaspoon seasoned salt
- 1/2 teaspoon paprika
- 1/3 teaspoon pepper
- 1/8 teaspoon garlic powder
- barbecue sauce, applesauce or pizza sauce for dipping, if desired (a pizza sauce recipe is included in **The Microwave Connection Leader's Guide**)

Equipment:

- cutting board
- knife
- small bowl
- measuring spoons
- spoon for mixing
- dry measuring cups
- clean plastic bag
- two 9-inch microwave-safe plates
- two paper towels
- fork or tongs
- pot holders
- serving plate

1. Cut the chicken or turkey into 1-inch cubes. Place the pieces in the small bowl.

2. Pour the milk over the chicken. Mix lightly with the spoon so that all the chicken pieces are coated with milk.

3. In the plastic bag, shake together until well-combined the Parmesan cheese, bread crumbs, seasoned salt, paprika, pepper and garlic powder.

4. Put half the chicken pieces in the bag. Shake the bag to coat the pieces evenly. Arrange these chicken pieces in a circle on the microwave-safe plate. Cover with a paper towel.

5. Microwave one plate on 100% power for 3-4 minutes, rotating the plate once. Chicken should not be pink inside when done.

6. Microwave the second plate of chicken pieces for 3-4 minutes, rotating the plate once.

7. Arrange the chicken nuggets on the serving plate. Enjoy with the dipping sauce of your choice, if desired.

Nutrients: B vitamins, iron, protein

RECIPE

Chocolate Pudding Just for Me

(makes 1 serving)

You need:

- 1/2 cup milk
- 2 teaspoons cornstarch
- 2 tablespoons semi-sweet chocolate chips
- 1 tablespoon sugar

Equipment:

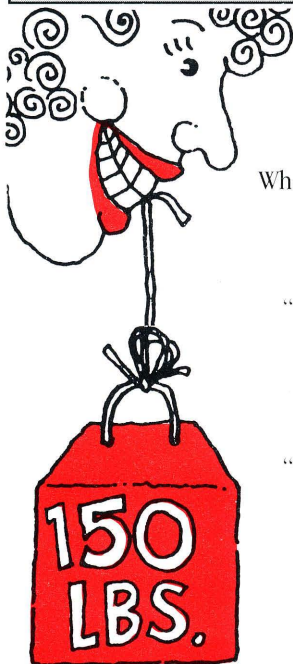
- liquid measuring cup
- measuring spoons
- 12-ounce microwave-safe mug or 2-cup glass measurer
- wooden spoon for stirring
- small bowl

1. Place the milk and chocolate chips in a 12-ounce microwave-safe mug or a 2-cup measurer.
2. Microwave on 100% power for 60-90 seconds or until hot, but not boiling. Stir to melt the chocolate chips.
3. While the milk and chocolate chips are heating, mix the cornstarch and sugar in a separate small bowl. Blend into the hot mixture.
4. Microwave on 100% power for 30-45 seconds, or until the mixture thickens and just begins to boil. Stir every 30 seconds.
5. Cool and chill (if you can wait that long)!

Another Way to Do It!

Pour the warm pudding into a 5-ounce paper cup. Put a wooden stick into the center of the cup. Freeze until firm. To serve, peel off the paper cup. Now you have frosty pudding!

Nutrients: B vitamins, calcium, carbohydrates, fat, protein



There once was a girl named Petunia Jones
Who was very well-known for her strong teeth and bones.

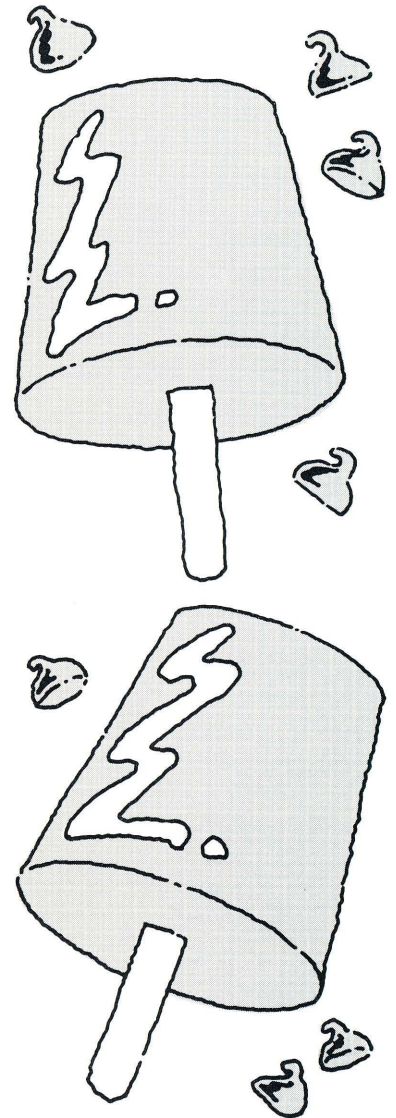
"I eat a secret nutrient," she was heard to say.
"It's part of my balanced diet each and every day."

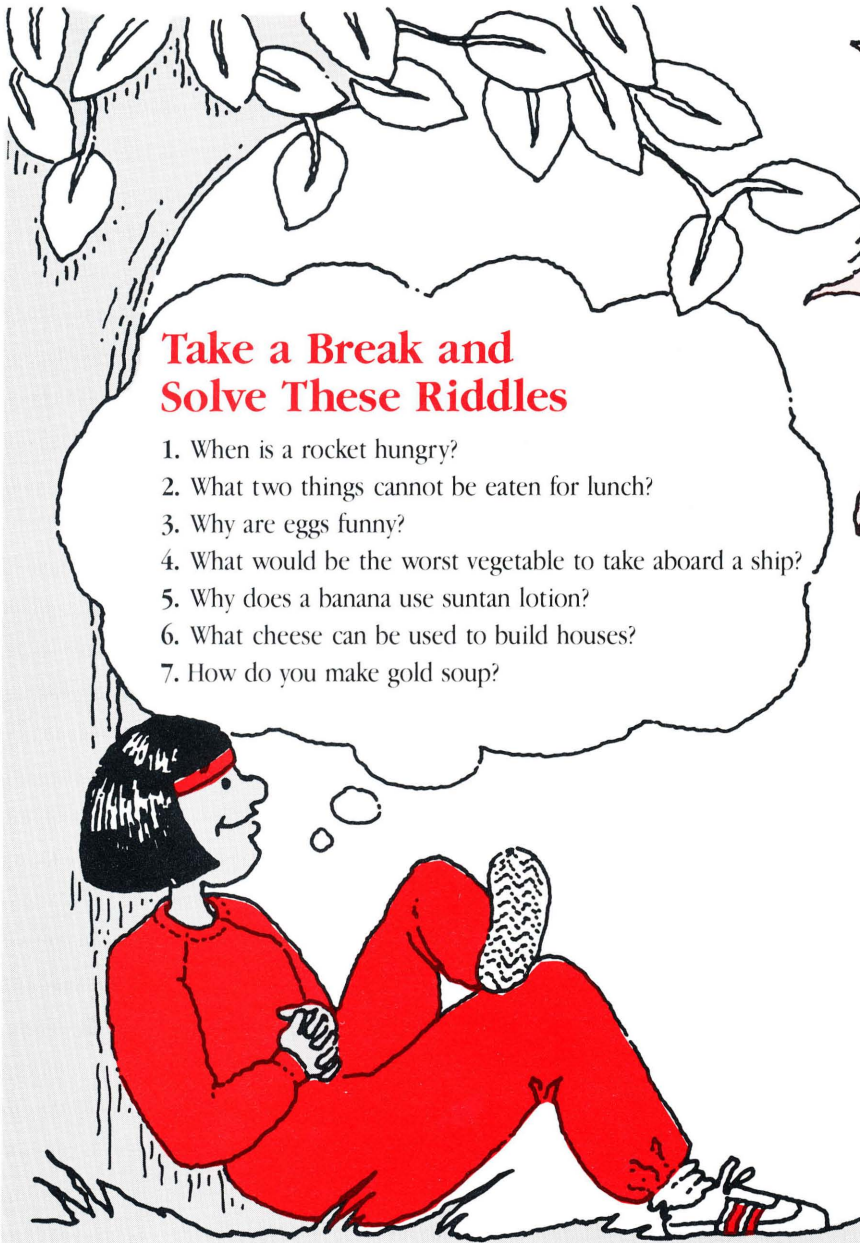
"It makes me strong in the arms, sturdy in the knees.
I get it from milk. I get it from cheese.
I get it from ice cream. I get it from yogurt.
Even leafy vegetables give me a spurt!

"Have you guessed it by now? Do you know it at last?
Do you want me to tell you?" Petunia Jones asked.
"Well, sound off the horns, and let's hear the drum
For my favorite nutrient—it's **CALCIUM!**"

I am often
the forgotten nutrient.
I carry other nutrients
to body cells and
waste products away.
I'm part of every cell.
I help digestion.
And I control the
temperature of your
body. Who am I?

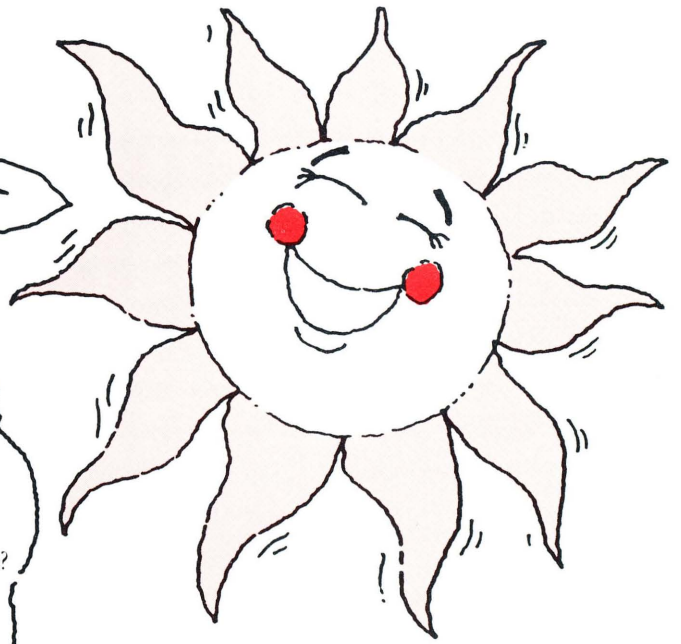
Water





Take a Break and Solve These Riddles

1. When is a rocket hungry?
2. What two things cannot be eaten for lunch?
3. Why are eggs funny?
4. What would be the worst vegetable to take aboard a ship?
5. Why does a banana use suntan lotion?
6. What cheese can be used to build houses?
7. How do you make gold soup?



Check Point: Lunch Break

Did you

stir any of the Lunch Break recipes during cooking? Why is stirring necessary? _____

clean the inside of the microwave oven you used?

What would you like to have for lunch tomorrow? Name the foods and tell why each one is good for you.

Answers to Riddles:

1. At launch time
2. Breakfast and dinner
3. Because they are always cracking up
4. A leek
5. Because it peels
6. Brick
7. Put in 1/4 carrots

Hamburger Happenings

Hamburger is nutritious and quick to fix! This protein-provider can be used in recipes ranging from the all-American hamburger to Mexican tacos to Italian pasta delights.

In supermarkets today, there are many choices besides hamburger that you can use for ground meat. Ground turkey has become a popular choice because it is usually lower in fat than hamburger, and in most recipes you can't tell the differences between ground turkey and hamburger. In this section, ground meat means either lean ground beef or ground turkey—the meat you choose is up to you.

Many recipes using ground meat require browning the ground meat before finishing the recipe. If you see directions that involve brown-

ing ground meat and then draining it, you should know that the microwave oven is a wonderful help! All you need is a hard plastic colander, some ground meat and a plan. Here's the plan:

RECIPE

Microwave-Browned Ground Meat

NOTE: When starting with frozen ground meat, it will take extra time for defrosting. See page 33 for information on quick defrosting.

You need:

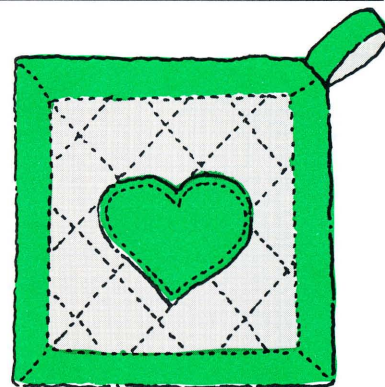
- 1 pound lean ground beef or ground turkey

Equipment:

- hard plastic colander
- 1-quart glass measurer or microwave-safe bowl
- fork

1. Place the ground meat in a plastic colander.
2. Rest the colander over a 1-quart glass measurer or microwave-safe bowl.
3. Microwave on 100% power for 3 minutes. Break up the meat with a fork.
4. Microwave on 100% power for 1½-3 minutes more until the meat has changed color from red to brown. Stir again with a fork. If there is still some uncooked meat, microwave it for another minute on 100% power.
5. Use the ground meat immediately in your favorite recipe. Carefully pour the grease into an empty can or other suitable container.

Nutrients: B vitamins, iron, fat, protein

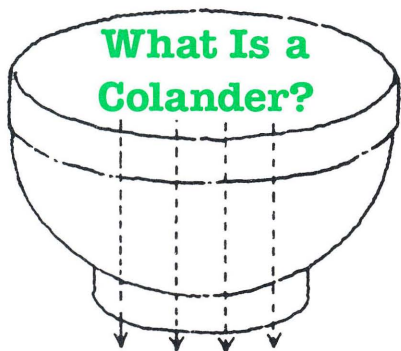


Safety First

Is the microwave oven a safe appliance? The answer is **yes!** Companies that make microwave ovens must follow strict safety standards set by the United States government.

Of course, like any other household cooking appliance, a microwave oven needs to be used according to directions. You must be very careful when dishes get hot from the food that is cooking within them. Keep pot holders close at hand and be extremely cautious around steam. It can burn you very quickly!

What Is a Colander?



A colander is a large bowl with holes in the bottom so liquids can drain through. Be sure to use a hard plastic (not metal) colander when browning ground meat in the microwave.

RECIPE

Sloppy Joes (makes 6 servings)

You need:

- 1 pound lean ground beef or ground turkey
- 1/2 cup chopped onion
- 1/2 cup chopped celery or green pepper
- 1 can (8 ounces) tomato sauce
- 1 tablespoon brown sugar
- 1/2 teaspoon salt
- 1/8 teaspoon pepper
- 6 hamburger buns

Equipment:

- hard plastic colander
- 1 1/2-quart microwave-safe casserole (with lid if available)
- fork
- paring knife
- cutting board
- paper towels
- can opener
- dry measuring cups
- measuring spoons
- wooden spoon for stirring
- pot holders

1. Rest the hard plastic colander in the casserole. Crumble the ground meat in the colander. Add onion and celery or green pepper.

2. Microwave on 100% power for 3 minutes. Break up the meat with a fork. Microwave for another 1 1/2-3 minutes on 100% power. Stir again with a fork. If there is still some uncooked meat, microwave for another minute on 100% power. Carefully pour the grease into an empty can or other suitable container.

3. Wipe the casserole with a paper towel to remove any leftover grease. Put the ground meat into the wiped-out casserole.

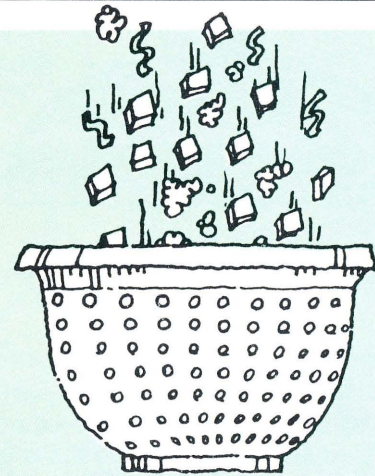
4. Stir in the tomato sauce, brown sugar, salt, paprika and pepper. Cover with the lid or plastic wrap that is vented.

5. Microwave on 100% power for 5 minutes. Stir with a wooden spoon (use pot holders and be very careful of steam while removing the lid). Recover and microwave for another 5 minutes on 100% power or until hot. Let stand, covered, five minutes before serving.

6. Wrap all six hamburger buns in paper towels. Warm in the microwave oven at 100% power for 20-30 seconds.

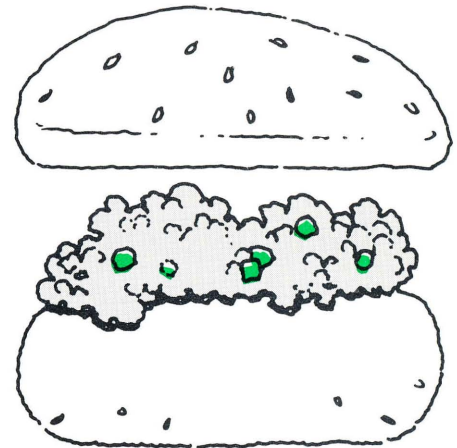
7. Spoon the sloppy joe mixture into the warm buns. Serve with glasses of ice-cold milk.

Nutrients: vitamin A, B vitamins, vitamin C, iron, carbohydrates, fat, protein



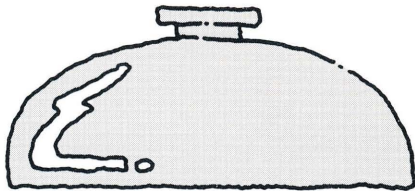
Time Saving Tip

If your ground meat recipe calls for onion or green pepper, just add that item to the ground meat in the colander before you begin to cook. As you stir with the fork, all the flavors combine and you save time and energy.



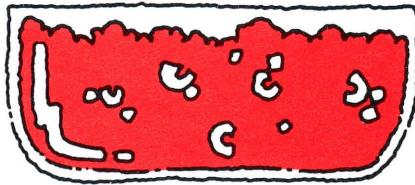
Help Wanted

Nutrient wanted to help bodies grow, repair cells and help form substances to fight infection. Animal proteins (from milk, cheese, meat, poultry, fish and eggs) and vegetable proteins (from nuts, peanut butter, grains and dried beans) should apply. Please apply to P.O. Box Health, Every Person, U.S.A.



Cover Pasta Casseroles

When using a microwave recipe with uncooked noodles or other pasta, keep the ingredients covered as the mixture cooks so the steam that forms will help cook the pasta.



RECIPE

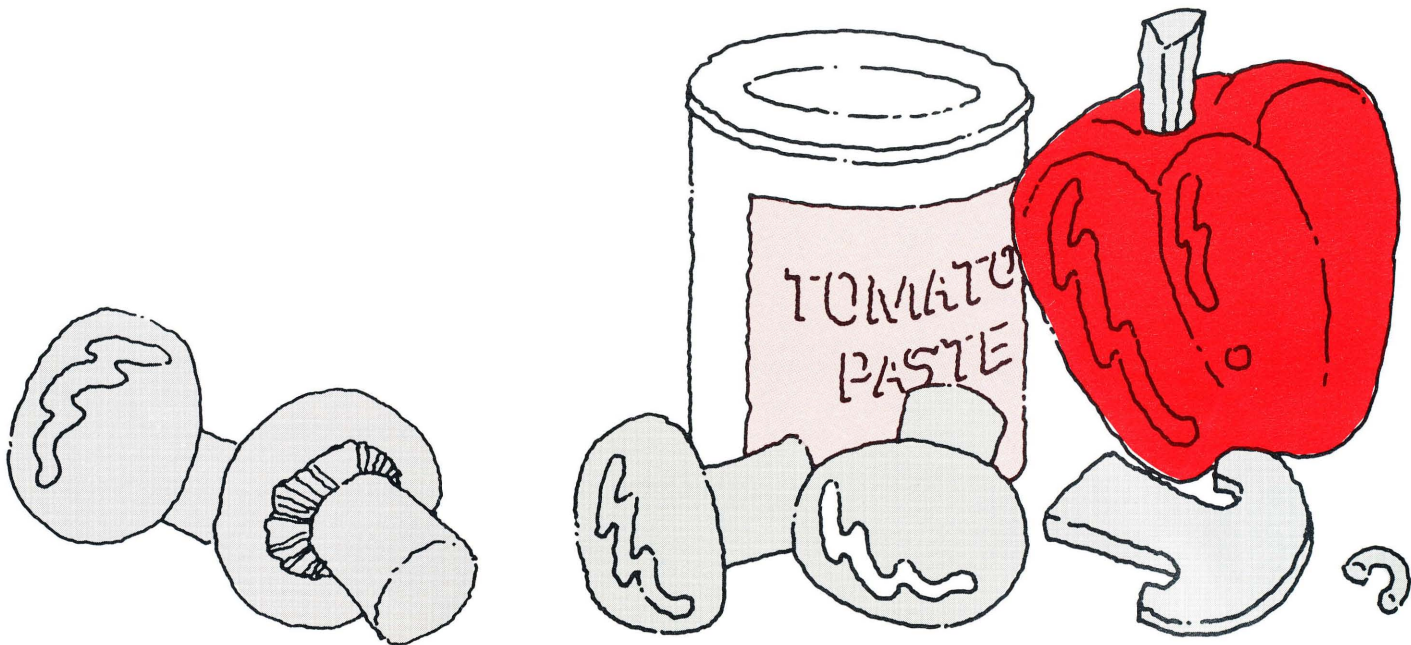
Pizza Casserole (makes 4 servings)

You need:

- 1 pound lean ground beef or ground turkey
- 1/3 cup chopped onion
- 1/3 cup chopped green pepper
- 1 can (6 ounces) tomato paste
- 1 can (4 ounces) mushroom pieces, drained
- 1/2 teaspoon salt
- 1/8 teaspoon garlic powder
- 1/2 teaspoon dried oregano leaves, crushed
- 1/2 teaspoon dried basil leaves, crushed
- 1/8 teaspoon ground pepper
- 2 cups water
- 2 cups uncooked noodles
- 1 cup (4 ounces) shredded mozzarella cheese
- 1/4 cup grated Parmesan cheese

Equipment:

- hard plastic colander
- 1-quart glass measurer or microwave-safe bowl
- fork
- paring knife
- cutting board
- can opener
- dry and liquid measuring cups
- measuring spoons
- 2-cup glass measurer
- 2- to 4-quart microwave-safe casserole dish (with lid if available)
- wooden spoon for stirring
- pot holders



1. Crumble the ground meat into the plastic colander. Add the chopped onion. Rest the plastic colander in the quart glass measurer or microwave-safe bowl.
2. Microwave on 100% power for 3 minutes. Break up the meat with a fork. Microwave for another 1½-3 minutes on 100% power. Stir again with a fork. If there is still some uncooked meat, microwave for another minute on 100% power. Pour the grease into an empty can or other suitable container.
3. Put the drained meat and onions in a 2- to 4-quart microwave-safe casserole dish.
4. Add the green pepper, tomato paste, drained mushroom pieces, salt, garlic powder, oregano, basil, pepper, water and uncooked noodles. Stir.
5. Cover the casserole with a lid or plastic wrap that is vented. The plastic wrap should not touch the food. Microwave on 100% power for 5 minutes. Stir well with a wooden spoon. (Use pot holders and be very careful of steam while removing the lid.) Recover the casserole.
6. Microwave for another 5 minutes on 100% power. Use pot holders to remove the lid or plastic wrap. Stir well with a wooden spoon. Put the cover back in place.
7. Microwave a third time for 5 minutes on 100% power. Stir again with a wooden spoon (remembering to use pot holders). If the noodles are not tender, recover the casserole and microwave on 100% power for an additional 2-3 minutes. Stir well.
8. Sprinkle the mozzarella cheese and Parmesan cheese on top of the noodle mixture.
9. Microwave on 100% power, uncovered for 1-1½ minutes or until the cheese is melted.

Nutrients: vitamin A, B vitamins, vitamin C, calcium, iron, carbohydrates, fat, protein

Dear Gabby.

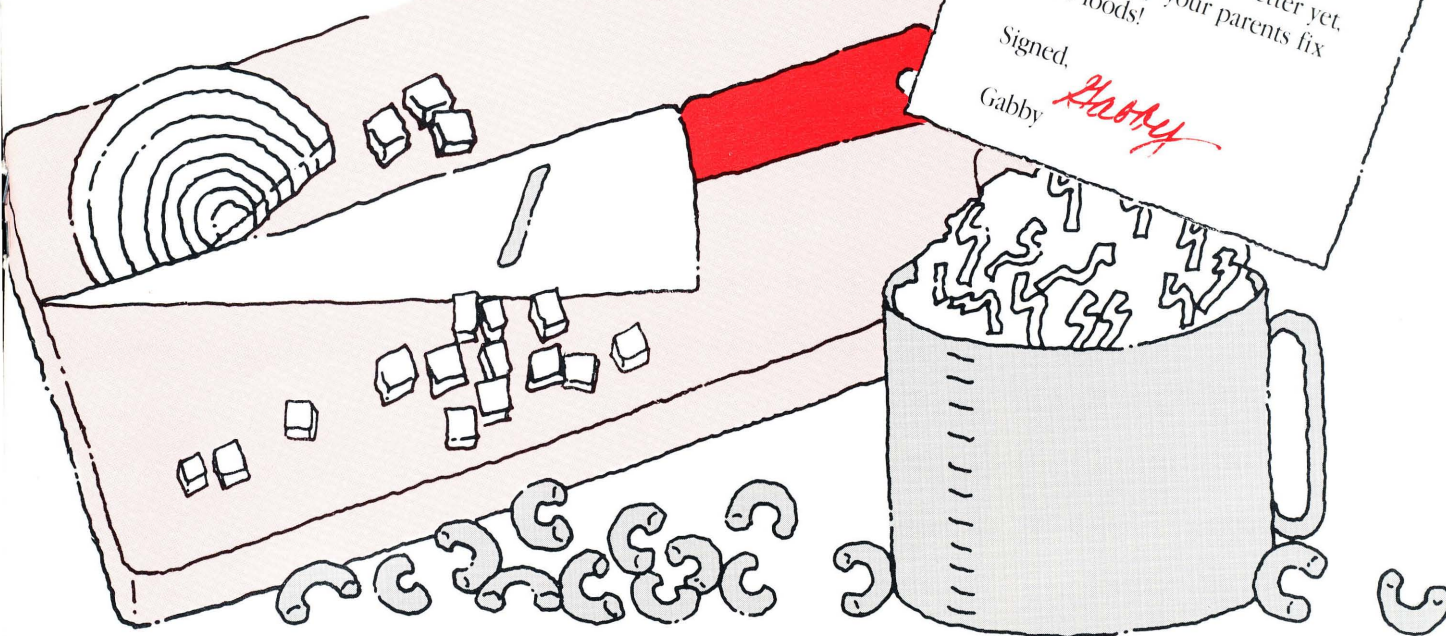
I have a problem! My parents try to fix balanced meals every day and they often fix liver to make sure I get enough iron in my diet. Now, I know iron is good for me because it helps blood cells carry oxygen to all parts of my body. But there must be other foods high in iron besides liver! Help!!

Signed,
Getting Bored by Liver
Getting Bored by Liver

Dear G.B.B.L.,

You're right—iron is good for you and liver has lots of it. And while many people like the taste of liver, not everyone is a liver lover. Ask your parents to fix other foods that are high in iron—meats, eggs, dried beans, dark green leafy vegetables, dried fruits, and whole grain and enriched breads and cereals. Better yet, offer to help your parents fix these foods!

Signed,
Gabby
Gabby



RECIPE

Taco Pockets (makes 6 servings)

You need:

- 1 pound lean ground beef or ground turkey
- 1 can (8 ounces) tomato sauce
- 2 teaspoons instant minced onion
- 1/2 teaspoon salt
- 1 teaspoon chili powder
- 1/2 teaspoon ground cumin, if desired
- 1/4 teaspoon instant minced garlic or garlic powder
- 1/4 teaspoon dried oregano leaves, crushed
- 3 pocket breads (6-inch diameter)
- 1 1/2 cups shredded lettuce
- 1/2 cup shredded cheddar cheese

Equipment:

- hard plastic colander
- 1-quart glass measurer or 1-quart microwave-safe bowl
- fork
- paper towels
- measuring spoons
- rubber spatula
- wooden spoon for stirring
- dry measuring cups
- grater
- paring knife
- cutting board

1. Rest the plastic colander in the quart glass measurer or microwave-safe bowl. Put the ground meat in the colander. Microwave on 100% power for 3 minutes. Break up the meat with a fork.

2. Microwave for another 1 1/2-3 minutes on 100% power until the meat is no longer pink. Stir again with a fork. If there is still some uncooked meat, microwave for another minute on 100% power. Carefully pour the grease into an empty can or other suitable container.

3. Wipe any leftover grease out of the quart measurer with paper towels.

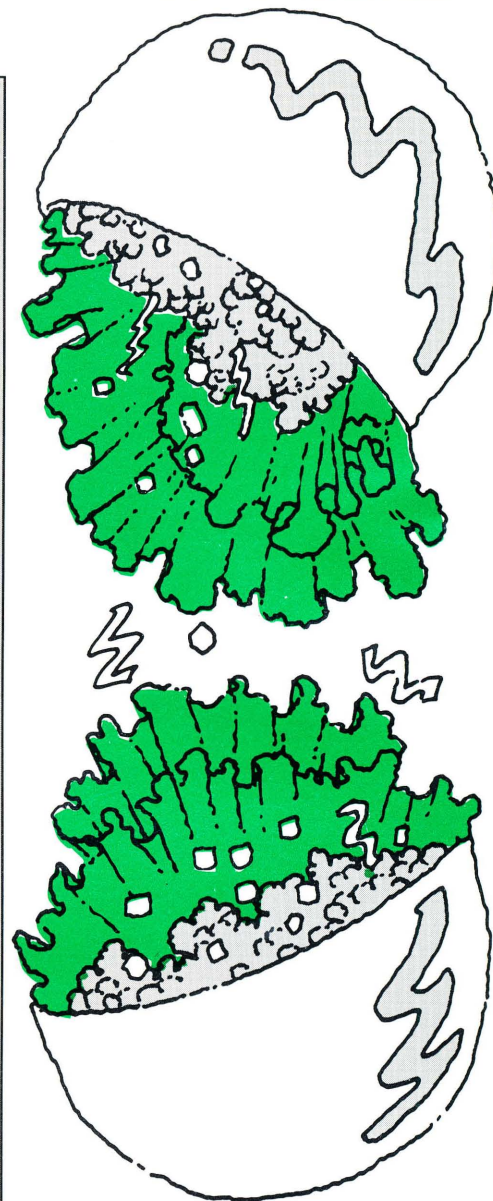
4. Put the ground meat into the wiped out quart glass measurer or microwave-safe bowl. Add the tomato sauce, onion, salt, chili powder, cumin, garlic and oregano. Mix well.

5. Microwave on 100% power for 4 minutes. Stir.

6. Microwave for another 3-4 minutes on 100% power until the mixture is hot and bubbly.

7. Cut each pocket bread in half. Fill each pocket with the meat filling. Top with the lettuce and cheese.

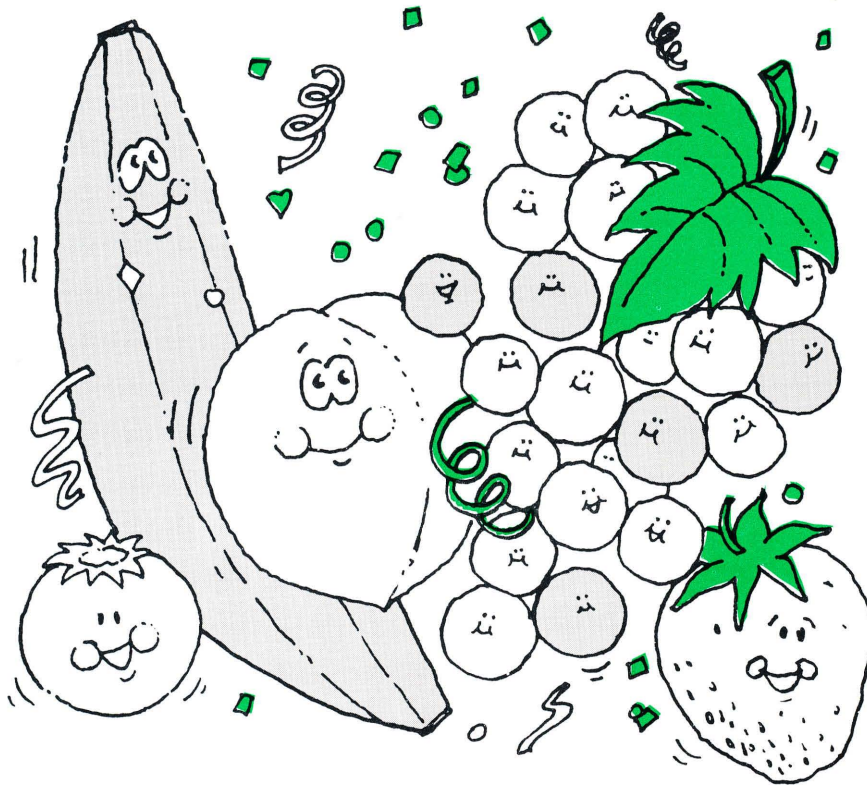
Nutrients: vitamin A, B vitamins, vitamin C, calcium, iron, carbohydrates, fat, protein



Bread Has Pockets?

Pocket bread comes from Middle Eastern countries. It is also called pita bread, Arab bread, Israeli bread, Syrian bread or bubble bread. As the dough bakes, it puffs and forms a pouch. Fillings can then be put in the pouch for an easy-to-eat sandwich.

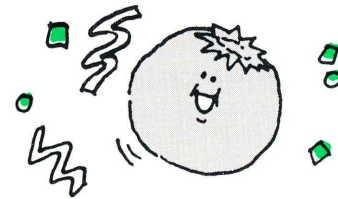
What can you serve with taco pockets for a well-balanced meal?



Food Fillers

Fill in the missing letters for these foods. The shaded squares will spell out a nutrient found in all these foods.

E N U T B T T R
 D I E B E A N S
 P U L T R
 M A
 C H S E
 S H
 U T S



RECIPE

Fruit Fiesta (makes 6-8 servings)

You need:

- 1/2 cup orange juice
- 1 tablespoon sugar
- 1 1/2 teaspoons cornstarch
- 3-4 cups cut up, assorted fruit (such as melons, blueberries, strawberries, bananas, apples, grapes, peaches) or well-drained canned fruits

Equipment:

- dry and liquid measuring cups
- measuring spoons
- microwave-safe bowl
- spoon or whisk for stirring
- large bowl

1. Mix the orange juice, sugar and cornstarch in the microwave-safe bowl.
2. Microwave on 100% power for 1-2 minutes, stirring every minute, until thickened.
3. Chill the orange juice mixture in the freezer about 10 to 15 minutes.
4. Pour the chilled glaze over the fruit. Stir gently and serve.

Nutrients: vitamin A, vitamin C, carbohydrates, fiber

Check Point: Hamburger Happenings

Did you

- try browning ground beef or ground turkey in the microwave? If so, how did you like this method?

- learn about different foods that are good sources of protein by completing the puzzle? What have you eaten today that is a good source of protein? _____

Is the microwave oven a safe appliance? Why or why not? _____

What do you need to be careful of when removing dishes from a microwave oven? _____

Baked Potato Bonanza

Many 4-H members really like the tasty flavor of baked potatoes. Some members even grow their own potatoes and other vegetables in 4-H gardening projects, so let's connect this favorite food to microwave cooking.

Baking a potato in the microwave oven is really very simple, but it is helpful to have a plan of action to be sure you are happy with the results. Here are some tips to help you prepare super spuds.

1. Choose potatoes that are uniform in shape and size. Rather than choosing two large potatoes and one small potato, select three similar in size so they will cook more evenly.

2. Pierce the skin two or three times with a fork. Any vegetable or fruit that has a skin needs to be pierced before it is cooked in a microwave. This will prevent a possible explosion due to the build-up of steam within the food as it cooks.

3. Elevate potatoes on a rack if available. This will promote air circulation and aid in more even cooking. Arrange the potatoes so that the more pointed end is placed toward the center.

4. Weigh the potatoes, if possible, so that your timing for microwave cooking will be more accurate. Do you have any type of kitchen scales you could use? Some people have a small scale they use for weighing foods when they are dieting. The guideline for the amount of time to use when baking a potato in the microwave is to

allow 6-7 minutes per pound on 100% power. **If you do not have a scale, use the guidelines in step 3 of the Baked Potato Basics recipe on page 27.**

Weight Reminders

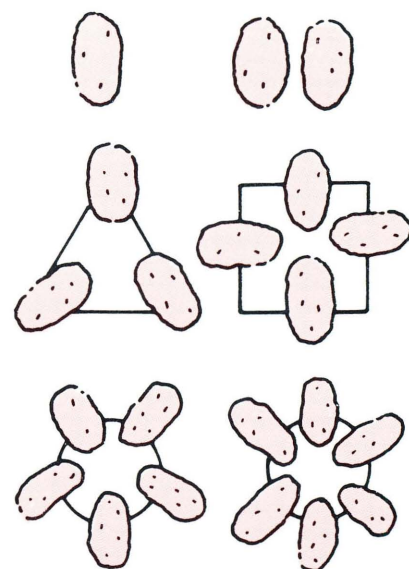
16 ounces = 1 pound
454 grams = 1 pound

5. It is important to arrange the potatoes so that there are a couple of inches of space between them. Try using the ideas that follow:

- Whenever possible, use round dishes or arrange food in a circular pattern.
- When cooking individual items like baked potatoes, follow this plan:
 - one item—put in the center of the oven
 - two—side by side
 - three—form a triangle
 - four—form a square
 - five or more—arrange in wagon-wheel fashion with none in the center

6. Do not overbake the potato. If a potato is baked too long in the microwave oven, it tends to be

gummy and compact in texture and the skin resembles a dried prune. How do you know if a baked potato is done? A microwaved potato should **not** feel soft to the touch at the end of the cooking time. Standing time or carry-over cooking time is **very important** for the potatoes to finish cooking properly. If they are cut open immediately upon coming out of the microwave, hard spots are likely to be found throughout the potato. It is a good idea to wrap potatoes in a clean terry cloth kitchen towel and let them stand on a counter for at least 5-10 minutes. Potatoes will keep warm up to 30 minutes.



RECIPE

Baked Potato Basics

You need:

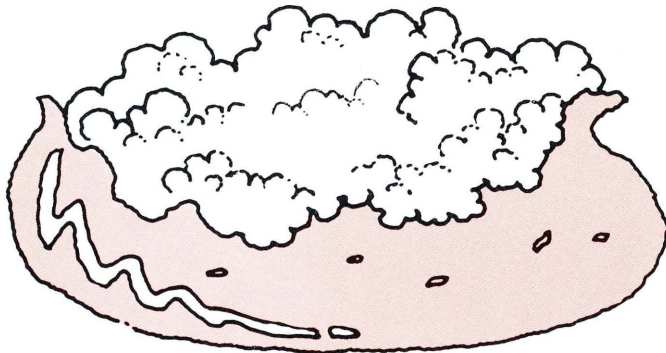
- a potato for each person who's hungry

Equipment:

- vegetable scrub brush
- paring knife
- fork
- kitchen scales, if available
- microwave roasting rack, if available
- clean kitchen terry towel

1. Scrub the potatoes under running water until they are clean. Remove any "spots" with a paring knife.
2. Pierce the scrubbed potatoes twice with a fork, so that steam can escape during cooking. If possible, weigh the potatoes on a kitchen scale.
3. To find out the total cooking time, multiply the weight of the potatoes times 6-7 minutes per pound. If you aren't certain of the weight, a guide for medium-sized potatoes is:
1 potato—3 to 5 minutes
2 potatoes—5 to 7 minutes
3 potatoes—7 to 10 minutes
4 potatoes—10¹/₂ to 12¹/₂ minutes
5 potatoes—12¹/₂ to 14 minutes
6 potatoes—14 to 16 minutes
4. Arrange the potatoes to allow a couple inches of space between them (see page 26 for a suggested arrangement). Put the potatoes on a microwave roasting rack if one is available.
5. Microwave the potatoes on 100% power for one-half of the total cooking time.
6. Turn the potatoes over and rotate. Continue to microwave on 100% power for the last half of the cooking time.
7. Wrap the potatoes in a clean kitchen terry towel. The potatoes will still feel slightly firm, but they will complete cooking during the 5-10 minutes of standing time.
8. Serve with your favorite topping.

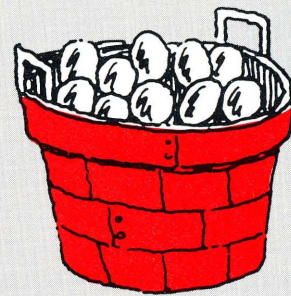
Nutrients: B vitamins, vitamin C, carbohydrates, fiber



If you eat a food high in vitamin C every day, your body cells and tissues will be healthy for play! Choose from oranges, broccoli, strawberries, tomatoes, green peppers, cantaloupe, cabbage and potatoes.

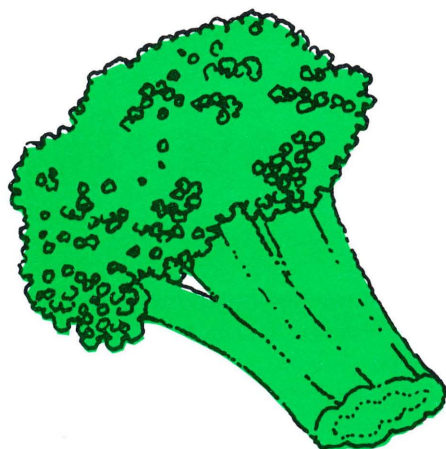
Carbohydrates are a good energy source. They're found in enough foods to feed a horse! They're in breads, cereals, potatoes and corn, noodles, rice and fruits—the list goes on and on!

Sugars and sweets are carbohydrates, too, but they are not as nutritious for you. So remember to do your body and teeth a favor... limit the amounts of sugar and sweets you savor!

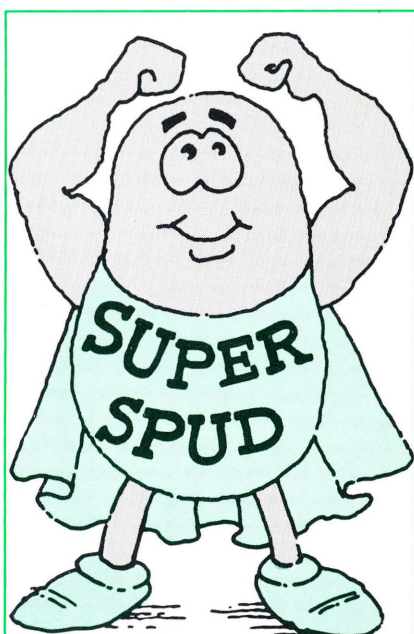


Helpful Hint:

Store potatoes in a cool, dark, dry place—**not** in the refrigerator. Refrigerator temperatures turn some of the potato starch to sugar, making the cooked potato too sweet and too dark.



Need an easy way to cook frozen broccoli? See "Easy Does It Vegetables" on page 34.



Potatoes Are Good for You . . .

Potatoes make a valuable contribution to your daily need of vitamin C and some B vitamins. Potatoes are also a good source of carbohydrates, your body's main source of fuel for energy! Potatoes have fiber and are low in calories. In fact, a medium potato has about 100 calories, which is a little more than a medium-sized apple. It's the toppings that can add extra calories!

RECIPE

Cheesy Broccoli Potato

(makes 2 servings)

You need:

- | | |
|---|---|
| <input type="checkbox"/> 1 tablespoon margarine or butter | <input type="checkbox"/> 1/2 cup shredded sharp cheddar cheese |
| <input type="checkbox"/> 1 tablespoon flour | <input type="checkbox"/> 1/2 cup chopped or cut up broccoli, cooked and drained |
| <input type="checkbox"/> 1/4 teaspoon salt | <input type="checkbox"/> 2 baked potatoes |
| <input type="checkbox"/> 1/4 teaspoon dry mustard | |
| <input type="checkbox"/> 1/2 cup milk | |

Equipment:

- | | |
|--|--|
| <input type="checkbox"/> 1-quart glass measurer | <input type="checkbox"/> fork or whisk |
| <input type="checkbox"/> measuring spoons | <input type="checkbox"/> paring knife |
| <input type="checkbox"/> dry and liquid measuring cups | |

- 1.** Place the margarine in a 1-quart glass measurer. Microwave on 100% power for 30 seconds.
- 2.** Use a fork or whisk to stir in the flour, salt and mustard. Gradually stir in the milk using the fork or whisk.
- 3.** Microwave on 100% power for 2-3 minutes, stirring every minute with the fork or whisk until thick.
- 4.** Stir in the cheese. Gently add the drained cooked broccoli. Microwave on 100% power for 1 minute, until hot.
- 5.** Put the baked potato on a serving plate. Split open the top and pour the broccoli-cheese sauce over the baked potato. Enjoy.

Nutrients: vitamin A, B vitamins, vitamin C, calcium, carbohydrates, fiber, fat, protein

Potato Puzzler

Across

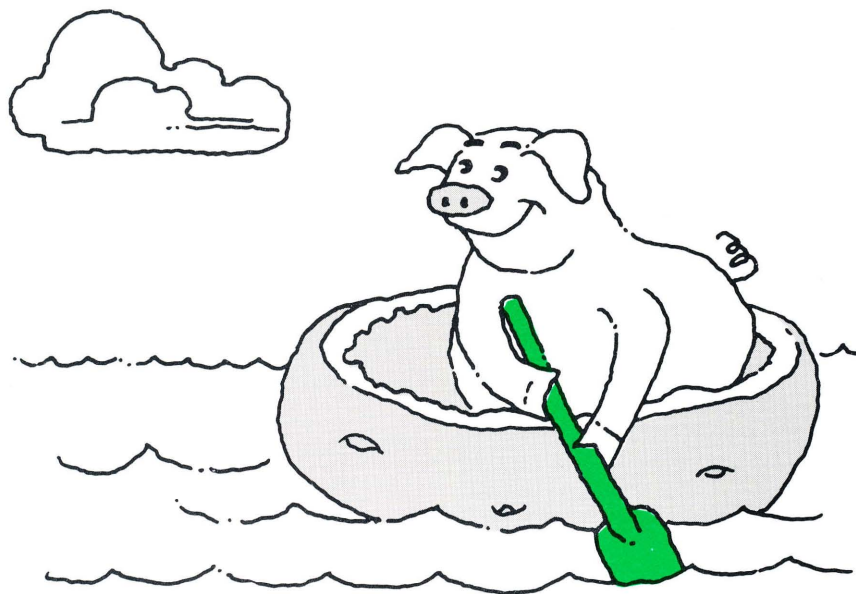
1. _____ are the nutrients in potatoes that provide us with energy.
4. When two or more potatoes are cooked together in the microwave, they need to be the _____ size.
6. Remember to _____ the potato before cooking to prevent a possible explosion.
7. During _____, the potato will continue to cook outside of the microwave oven.

Down

2. Potatoes are low in _____.
3. Potatoes should be stored in a _____, dark, dry place.

									4				
	2			3									
1													5

4. Always _____ potatoes before using them to make sure they are clean.
5. Overbaking a potato causes the _____ to look like a dried prune!



RECIPE

Ham Boats (makes 1 serving)

You need:

- | | |
|---|--|
| <input type="checkbox"/> 1 baked potato | <input type="checkbox"/> 1 tablespoon finely chopped onion |
| <input type="checkbox"/> 2 tablespoons milk | <input type="checkbox"/> 1/8 teaspoon dry mustard |
| <input type="checkbox"/> 2 tablespoons plain yogurt | <input type="checkbox"/> 2 tablespoons shredded cheddar cheese |
| <input type="checkbox"/> 1/2 cup diced fully cooked ham | |

Equipment:

- | | |
|---|--|
| <input type="checkbox"/> paring knife | <input type="checkbox"/> dry measuring cups |
| <input type="checkbox"/> cutting board | <input type="checkbox"/> small mixing bowl |
| <input type="checkbox"/> medium-sized spoon | <input type="checkbox"/> potato masher or fork |
| <input type="checkbox"/> measuring spoons | <input type="checkbox"/> serving plate |

- 1.** Slice the baked potato in half lengthwise with a paring knife. Gently scoop out the inside of the potato.
- 2.** Mash the potato centers with milk and yogurt. Mix in the ham, onion and mustard. Put the shells on a serving plate.
- 3.** Spoon the mashed potato mixture back into the shells. Sprinkle 1 tablespoon of cheese onto each half.
- 4.** Microwave on 100% power for 2 minutes. If the cheese has not melted and the potato is not hot, microwave on 100% power for another minute or two. Enjoy.

Ham Boats for Two:

Double all the ingredients. Microwave the filled potatoes on 100% power for 3 1/2 minutes and then 2-3 minutes more.

Nutrients: B vitamins, vitamin C, carbohydrates, fiber, protein

Did you know? ...

Potatoes first grew in the Andes Mountains of Peru and Chili. They were used as a cure for healing broken bones, headaches, rheumatism and upset stomachs!



Try the Dish Test

Why not test a dish to see if it is microwave-safe?

- 1.** Place the dish to be tested in the microwave oven. **Do not test any dish that has gold or silver trim on it or that is special to your family and not replaceable if it were accidentally broken or damaged.**
- 2.** Measure 1/2 cup water into a 1-cup glass measurer.
- 3.** Place the filled measurer in the dish to be tested.
- 4.** Microwave for 1 minute on 100 percent power.
- 5.** If the dish is cool and the water is warm, then the dish is fine to use for microwaving. If the dish is hot, do not use it for microwave cooking. Be careful when checking the dish.

RECIPE

Igloo Pie (makes 6-8 servings)

Try this cool dessert with your hot potatoes!

You need:

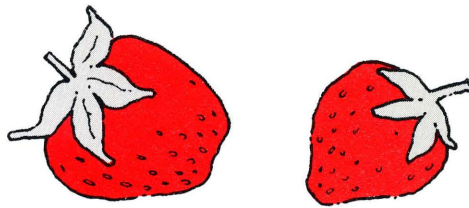
- vanilla wafers (about 30)
- 1 quart vanilla frozen yogurt or ice milk
- Very Berry Sundae Topping (see recipe below)

Equipment:

- 1-quart glass or other microwave-safe pie plate
- ice cream scoop
- table knife
- plastic wrap

1. Place the vanilla wafers across the bottom of the pie plate. Break a few wafers in pieces if needed to cover the bottom of the plate.
2. Stand more vanilla wafers up around the edge of the pie plate to form the crust.
3. If the frozen yogurt or ice milk is very firm, microwave on 100% power for 15 seconds until softened.
4. Scoop the frozen yogurt or ice milk on top of the vanilla wafer crust. Smooth the top of the pie with the table knife.
5. Cover the pie with plastic wrap. Place the pie in the freezer until firm enough to slice (at least 30 minutes).
6. Cut into serving slices. Top with Very Berry Sundae Topping.

Nutrients: B vitamins, calcium, carbohydrates, protein



RECIPE

Very Berry Sundae Topping (makes 2 cups)

You need:

- 2 tablespoons cornstarch
- 2 tablespoons sugar
- frozen fruit (thawed)
 - 1 package (10 ounces) frozen strawberries **or**
 - 1 package (10 ounces) frozen raspberries **or**
- 1/4 cup water
- 1 tablespoon lemon juice
- 2 cups frozen blueberries **or**
- 1 pint home-frozen berries

Equipment:

- 2-quart measurer or microwave-safe bowl
- dry and liquid measuring cups
- measuring spoons
- 1 cup glass measurer
- can opener
- wooden spoon for stirring

1. In a 2-quart measurer or microwave-safe bowl, combine the cornstarch and sugar. Stir in the water and berries.

2. Microwave on 100% power for 2-5 minutes, stirring every minute with a wooden spoon until thickened.

3. Add the lemon juice. Serve warm over Igloo Pie.

Nutrients: vitamin C, carbohydrates

Check Point: Baked Potato Bonanza

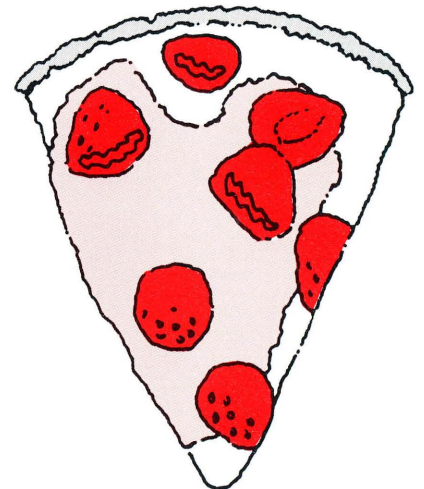
Did you

learn why potatoes are good for you? Name a nutrient found in potatoes. _____

bake a potato in the microwave? Did you like it better, the same or less than a potato baked in an oven?

Why? _____

top your potato? What is your favorite topping? _____



Microwave Show-Off Dinner

Share with others some of the ways that you connected good eating habits with safe food practices and with preparing quick and delicious meals.

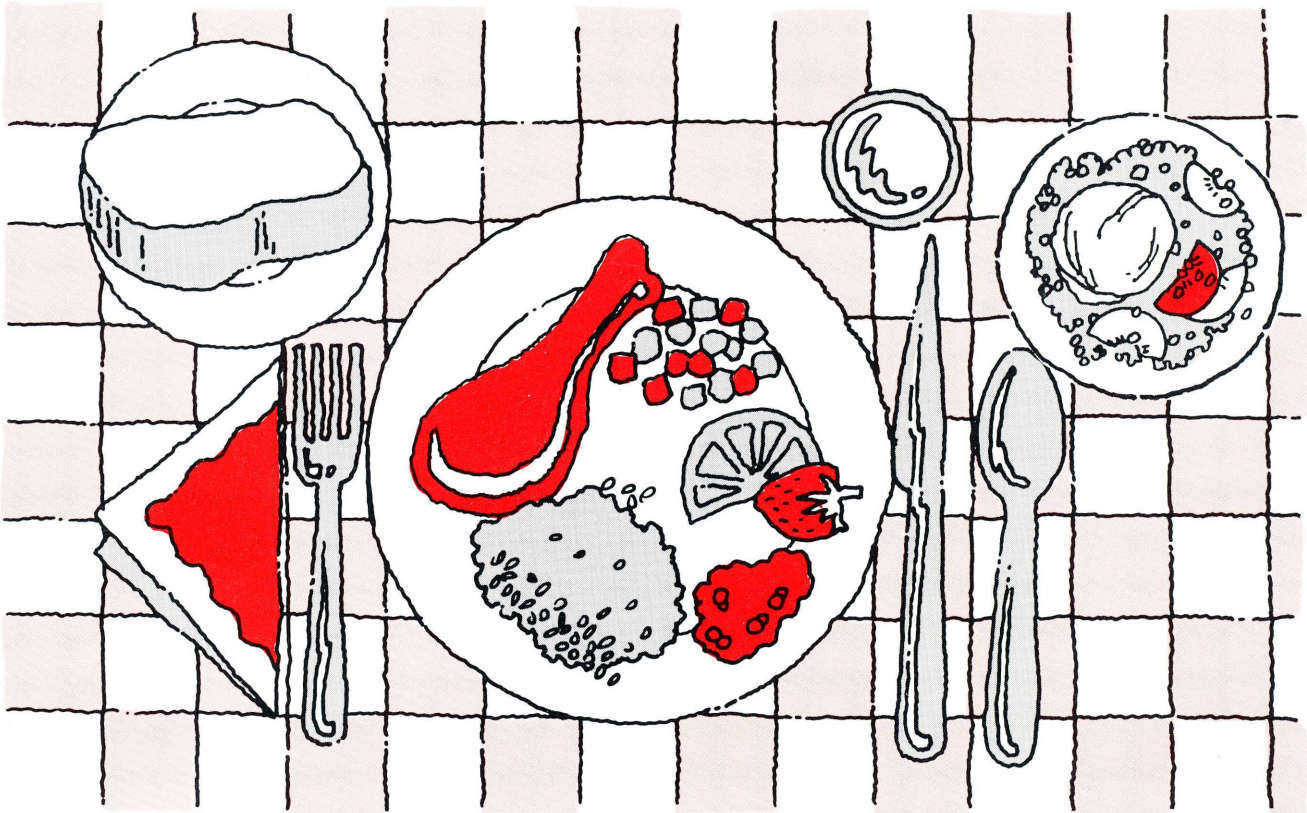
Just think of all the food experiences you have had so far in **The Microwave Connection** 4-H project. You may have liked some of the ideas so well that you will use them over and over again!

Here is a Microwave Show-Off Dinner you can serve to your friends or family members. Most of all, you can enjoy this special meal yourself!

The menu includes:

- Barbecued Chicken*
- Nice Rice*
- Easy-Does-It Vegetables*
- Cranberry Relish
- Warm French Bread
- Milk
- Fresh Fruit Crisp*

*Recipe follows



Q. Why does it say to remove the skin from the chicken?

A. There is a lot of fat in the skin and just beneath the skin in chicken. Some fat is important in your diet, since it helps carry certain vitamins and gives energy. But too much fat can be bad for your health and has been linked to heart attacks, strokes and certain cancers. Taking the skin off chicken helps reduce the amount of fat you eat.

In microwave cooking, removing the skin helps the seasonings penetrate the chicken more easily to add extra flavor. It will also help the chicken cook more evenly.



Be Safe, Not Sorry!

When you're cooking chicken in the microwave, it is very important to follow these safety tips:

- Arrange the chicken evenly in the cooking dish with the thickest parts toward the outside of the dish.
- Cook the chicken in a covered container to make sure it cooks evenly. A covered dish is the best choice; if you use plastic wrap, make sure the plastic wrap does not touch the food! The cover will hold moisture in and help the chicken cook evenly.
- Rotate and turn the chicken over during the cooking time.
- Make sure the chicken is done by piercing it with a fork. If there are no juices or the juices are clear or golden, the chicken is done. If the juices are pink, microwave the chicken on 100% power for 2 more minutes. Check the juices again.
- Let the chicken stand, covered, for 5 minutes before serving.

RECIPE

Barbecued Chicken (makes 6 servings)

You need:

- | | |
|--|---|
| <input type="checkbox"/> 3 tablespoons brown sugar | <input type="checkbox"/> 2 teaspoons Worcestershire sauce |
| <input type="checkbox"/> 3 tablespoons catsup | <input type="checkbox"/> 1/4 teaspoon salt |
| <input type="checkbox"/> 2 tablespoons chili sauce | <input type="checkbox"/> 1/8 teaspoon pepper |
| <input type="checkbox"/> 1 tablespoon vinegar | <input type="checkbox"/> 2 to 3 pounds meaty chicken pieces, skin removed |
| <input type="checkbox"/> 2 teaspoons lemon juice | |

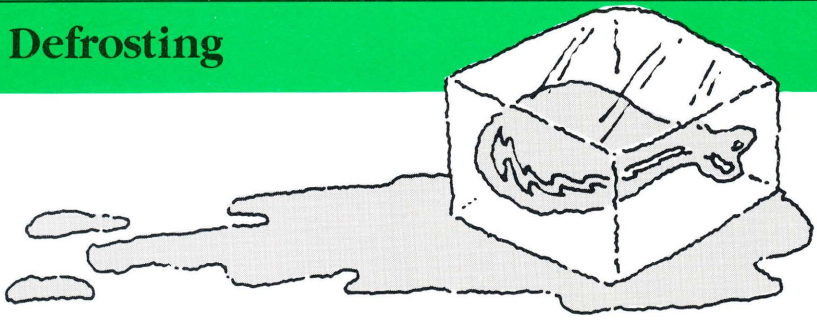
Equipment:

- | | |
|---|--|
| <input type="checkbox"/> 2-cup microwave-safe measuring cup | <input type="checkbox"/> waxed paper or other nonstick cooking paper |
| <input type="checkbox"/> measuring spoons | <input type="checkbox"/> tongs or fork |
| <input type="checkbox"/> spoon or fork for stirring | <input type="checkbox"/> 9-inch pie plate |
| <input type="checkbox"/> 8-inch by 12-inch microwave-safe baking dish | <input type="checkbox"/> pastry brush |
| | <input type="checkbox"/> pot holders |

1. In the 2-cup microwave-safe measurer, mix brown sugar, catsup, chili sauce, vinegar, lemon juice, Worcestershire sauce, salt and pepper.
2. Microwave, uncovered, on 100% power for 1 1/2 minutes or until mixture boils; set aside.
3. Arrange the chicken in the 8-inch by 12-inch microwave-safe baking dish with the thickest portions of the chicken toward the outside of the dish.
4. Cover the dish with waxed paper or other nonstick cooking paper and microwave on 100% power for 10 minutes, rotating dish once.
5. Remove the chicken to the pie plate using fork or tongs.
6. Brush the chicken with the barbecue sauce. Cover with waxed paper or other nonstick cooking paper and microwave on 100% power for 8 to 10 minutes. Turn the chicken over to rearrange it once or twice during the cooking. To make sure the chicken is done, pierce the chicken with a fork. If there are no juices, or if the juices are clear or golden, the chicken is done. If the juices are pink, microwave the chicken on 100% power for 2 more minutes. If the chicken is not done, remember to wash your utensils before using them again to check the chicken juices.
7. Let the chicken stand covered for 5 minutes before serving.

Nutrients: B vitamins, iron, protein

Defrosting

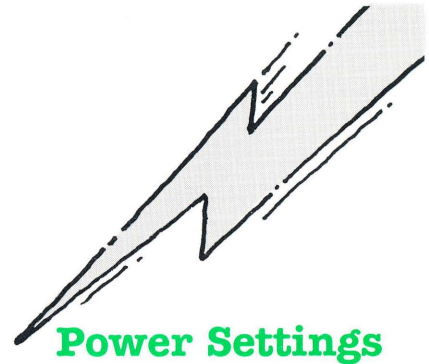


It may be hard to believe, but defrosting foods in the microwave is actually a combination of cooking and resting time. This resting time allows the heat to travel to the center of the food so it defrosts in an even way.

Waxed paper or other nonstick cooking paper makes a good cover for foods during defrosting. As the outer surfaces begin to defrost, the waxed or other nonstick cooking paper helps to trap the unseen steam

and distribute the heat more evenly. It is helpful to rotate foods as they defrost or to turn foods over halfway through the defrosting time.

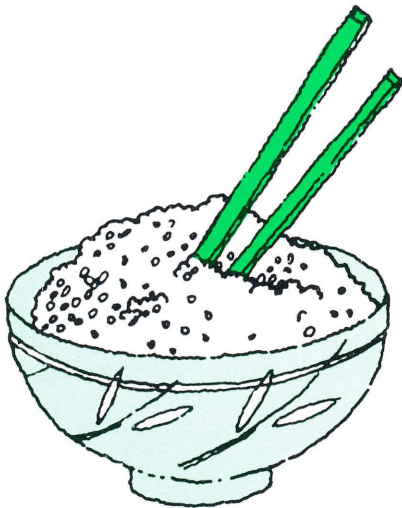
If your oven does not have a defrost feature, you can microwave the frozen food for a few minutes, then stop the oven and let the food stand for a few minutes (usually a time equal to the microwave period just completed). Continue with this cooking/resting time until the food is thawed.



Power Settings

Your microwave may have one or as many as ten different power settings. You may see words and/or numbers to describe these settings on the oven. Usually microwave cooks use 100 percent power most of the time. That is why almost all of the recipes in this **Microwave Connection** +H project are written for 100% power.

Many microwaves have an automatic defrost cycle. The power level for this is usually 30% or 50%. Other power levels are used for delicate foods when less microwave energy helps give better cooking results.



Rice Is Nice

If your microwave does not have 50% power, then microwave on 100% power in step 4 for 8-10 minutes. Allow 10 minutes standing time.

For plain rice, substitute 1 teaspoon salt for the chicken bouillon.

It takes about as long to cook rice in the microwave as it does on top of the stove... but no method reheats rice as well as the microwave.

RECIPE

Nice Rice (makes 4 servings)

You need:

- 1½ teaspoons margarine or butter
- 2 cups water
- 2 teaspoons instant chicken bouillon or 2 chicken bouillon cubes
- 1 cup long grain rice

Equipment:

- 3-quart microwave-safe casserole (with lid if available)
- 2-cup glass measurer
- measuring spoons
- dry and liquid measuring cups
- wooden spoon for stirring

1. Put the margarine and water in the 3-quart microwave-safe casserole. Microwave uncovered on 100% power for 5 minutes until boiling.

2. Stir in the bouillon and rice. Cover the casserole with a lid or plastic wrap that is vented. The plastic wrap should not touch the food.

3. Microwave on 100% power for 3½ minutes. Stir.

4. Microwave covered for 12-14 minutes more at 50% power, stirring once or twice until moisture is absorbed. Allow 5 minutes standing time. Serve with chicken.

Nutrients: B vitamins, carbohydrates



RECIPE

Easy-Does-It Vegetables

(makes 4 servings)

Some people who use microwave ovens cook frozen vegetables in the box. This method works well with small vegetables like peas, corn and chopped broccoli.

You need:

- 1 package (10 ounces) frozen peas and carrots or other small or chopped vegetables

Equipment:

- fork
- microwave-safe plate
- pot holders

1. Remove the vegetables from the freezer. If the package is foil wrapped, remove the foil.
2. Pierce the box two times on each side with a table fork to let steam escape.
3. Place the box on the plate for ease in handling and to prevent dye on the box from coming off onto your oven.
4. Microwave on 100% power for 2½-3 minutes.
5. Gently shake the vegetables and turn the box over.
6. Microwave for another 2-3 minutes on 100% power until the vegetables are steamy hot and cooked.
7. Use pot holders to remove the box from the oven. Drain carefully.
8. Season as desired or use according to recipe directions.

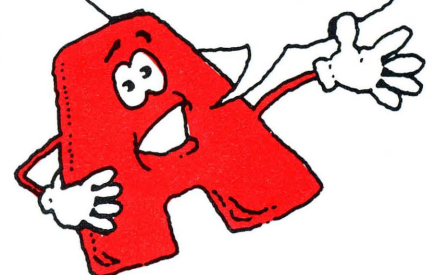
Nutrients: vitamin A, vitamin C, carbohydrates, fiber

Reheating Reminders

- Most foods reheat very well in the microwave oven.
- Try not to **recook** food when you reheat.
- Reheat foods on less than 100% power to get evenly heated foods. For example:
 - Reheat refrigerated main dishes at 50% power. Reheat each **1 cup serving** for 3-4 minutes on 50% power.
 - Reheat plates of cooked food at 70%-80% power. Reheat **one average size serving of meat, vegetables or potatoes** for 3-4 minutes on 80% power.
 - Reheat bread products wrapped in paper towels or napkins on 30% power. Reheat **one roll wrapped in a paper napkin** for 30 seconds on 30% power. If you do not have these power levels, reheat on 100% power for very short times.

Howdy!

My name is vitamin A, and I should be part of your diet at least every other day. You can find me in dark green or deep orange vegetables or fruit—broccoli, carrots, peaches, greens and cantaloupe—just to name a few. I'm also found in liver, egg yolk and milk. Stick with me and I'll help your eyes see in dim light. I'll help keep your skin glowing and keep you growing!



RECIPE

Fresh Fruit Crisp (makes 2 servings)

You Need:

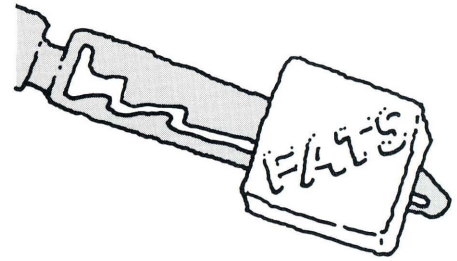
- 2 tablespoons quick-cooking or regular rolled oats
- 2 tablespoons brown sugar
- 1 tablespoon flour
- 1/8 teaspoon ground cinnamon
- dash of ground nutmeg
- dash of salt
- 1 tablespoon margarine or butter
- 2 cups peeled and sliced apples, pears or peaches
- frozen yogurt or ice milk as topping, if desired

Equipment:

- knife for peeling and slicing fruit
- small mixing bowl
- pastry blender or fork
- small microwave-safe casserole or dish
- measuring spoons
- dry measuring cups
- pot holders

1. In the small mixing bowl combine the rolled oats, brown sugar, flour, cinnamon, nutmeg and salt.
2. Cut in the margarine with a pastry blender or fork until crumbly; set aside.
3. Place the fresh fruit in the small microwave-safe casserole or dish. Top with the rolled oat mixture.
4. Microwave on 100% power for 3-5 minutes or until the fruit is tender, rotating casserole once.
5. Remove the dish with pot holders.
6. Serve warm topped with frozen yogurt or ice milk, if desired.

Nutrients: vitamin C, carbohydrates, fiber



Although Jack Sprat would eat no fat and his wife would eat no lean, they would have both been healthier if they'd eaten an amount in between.

Fat is an important nutrient that gives you the energy you need. It contains vitamins A, D, E and K. Their benefits are guaranteed!

But remember to choose fats wisely! It's the in-between that counts. Fried foods, butter and potato chips should be eaten in limited amounts!

Check Point: Microwave Show-Off Dinner

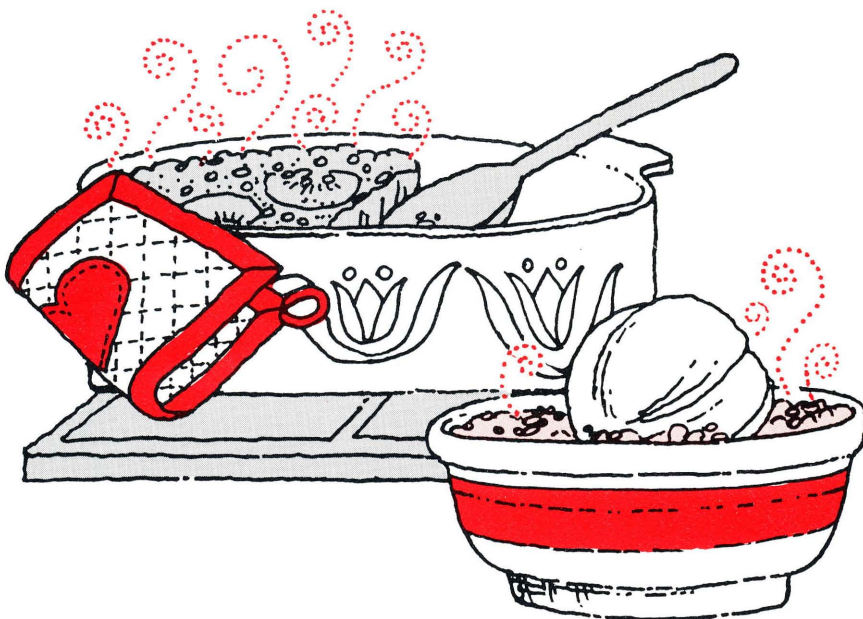
Did you

prepare a special meal for your friends or family? List the foods you served and list one nutrient in each of the foods _____

learn how to cook vegetables in a box? Why do you need to pierce the box? _____

remove the skin from the chicken before cooking? Why is this a good idea? _____

enjoy making a microwave show-off dinner? What foods would you like to try to fix in the microwave the next time you cook? _____



Connecting the Facts

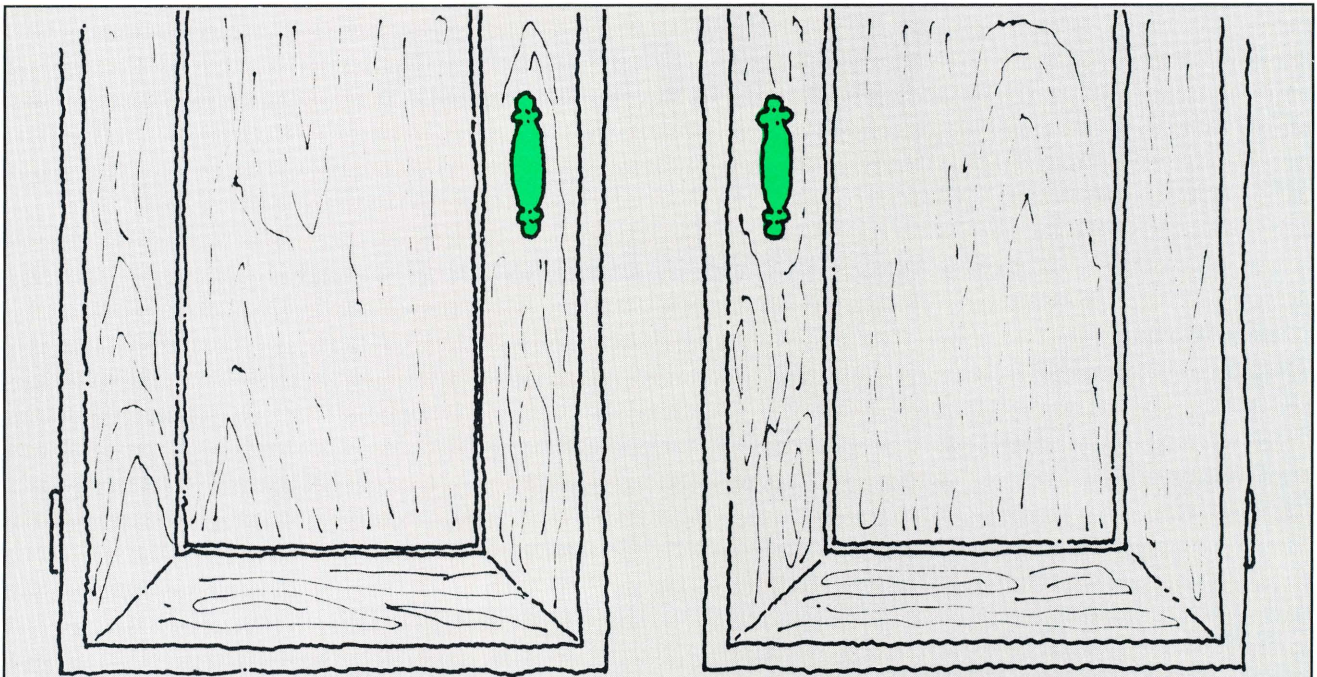
Directions:

Review what you have learned in *The Microwave Connection* 4-H project. Choose from the words listed below to fill in the blanks in the sentences. Then find the words that are hidden across, down or diagonally in the puzzle.

Words to Use:

VITAMIN C, PIERCE, FULL POWER, TIME, MOLECULES, IRON, ARRANGING, CALCIUM, STANDING, METAL, SAFE, WATTS, STIRRING, PROTEIN, COVERING, ROTATE

1. When using a microwave, you cook by _____.
2. Food cooks when microwave energy makes moisture _____ in food move very quickly to produce heat.
3. A nutrient found in milk and other dairy products that helps build strong bones and teeth is _____.
4. Some containers that can be used in the microwave are labeled microwave-_____.
5. _____ are ways to measure power.
6. High or 100% power means the same as _____.
7. _____ is a mineral in meats, egg yolks, liver, dark green leafy vegetables and dried beans. It helps blood cells carry oxygen to all parts of the body.
8. _____ time means that some cooking continues inside the food even after it is taken out of the oven.
9. _____ is a nutrient found in peanut butter, meat, cheese and fish.
10. _____ helps to move cooked parts of food from the edges of the dish to the center for more even cooking.
11. To _____ means to put small holes in the skin or covering of a food to let steam escape.
12. When you form a triangle to bake three potatoes, you are _____ them for even cooking.
13. _____ utensils should never be used in a microwave.
14. _____ helps keep moisture and heat in food.
15. To _____ means to change the position of food in the oven by turning the dish.
16. Orange juice is a great source of _____.



M P N R I E W A T T S T F O X
 V S C A L C I U M Z T X E T C
 I T Q P Y A L S Y N A D J P U
 T I S R R B C O X D N L K R D
 A R R A N G I N G M D T M O K
 M R I F I M W K X A I K L T L
 I I D F U O H M G N N J A E I
 N N G T P L W V V I G R S I N
 C G X S Z E L C O V E R I N G
 X S A M Q C T P A T S D R C A
 A T L E U U V I O U A F O F S
 N Y P T G L J Z M W F A N R P
 R O T A T E O D W E E B Z S A
 B O N L X S N C P I E R C E F

10:02

MICROWAVE

1	2	3
4	5	6
7	8	9
	0	

My Records

Name _____ Age _____ Address _____

Let's Get Started & Snacks in a Snap

At the Meeting

The food(s) I prepared

At least two things I learned

At Home

Food I prepared for my family or myself

Skills I practiced

Additional activities related to things in this lesson

Give Breakfast a Running Start

At the Meeting

The food(s) I prepared

At least two things I learned

At Home

Food I prepared for my family or myself

Skills I practiced

Additional activities related to things in this lesson

Name _____ Age _____ Address _____

Lunch Break

At the Meeting

The food(s) I prepared

At least two things I learned

At Home

Food I prepared for my family or myself

Skills I practiced

Additional activities related to things in this lesson

Hamburger Happenings

At the Meeting

The food(s) I prepared

At least two things I learned

At Home

Food I prepared for my family or myself

Skills I practiced

Additional activities related to things in this lesson

Name _____ Age _____ Address _____

Baked Potato Bonanza

At the Meeting

The food(s) I prepared

At least two things I learned

At Home

Food I prepared for my family or myself

Skills I practiced

Additional activities related to things in this lesson

Microwave Show-Off Dinner

At the Meeting

The food(s) I prepared

At least two things I learned

At Home

Food I prepared for my family or myself

Skills I practiced

Additional activities related to things in this lesson

My Recipes

Answers to Puzzles

All About Apples (page 9)

Choose firm apples with no bruises.

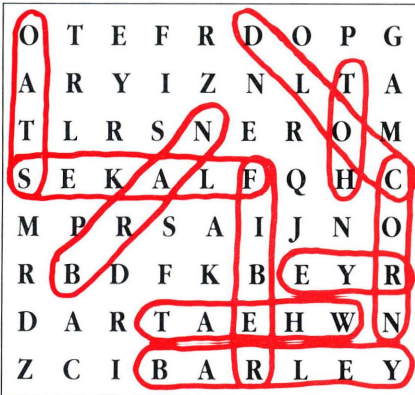
Apples are a good source of fiber.

Apples are also low in calories, with only 80 in a medium-sized one.

Keep apples cold to keep them crunchy.

A favorite variety of apples is Jonathon.

Cereal Search (page 14)



Fast Food Quiz (pg. 15)

French fries

Fried chicken sandwich

Regular hamburger

Egg, sausage and cheese biscuit

Plain baked potato

Grilled chicken sandwich

Bacon double cheeseburger

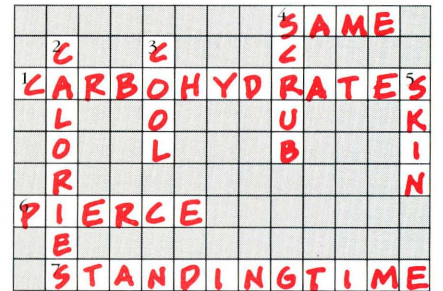
Pancakes with syrup

Food Fillers (page 25)

P E A N U T B U T T E R
 D R I E D B E A N S
 P O U L T R Y
 M E A T
 C H E E S E
 F I S H
 N U T S

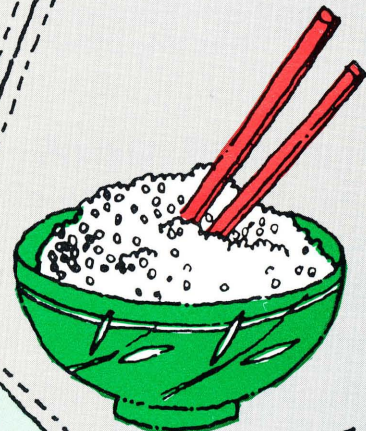
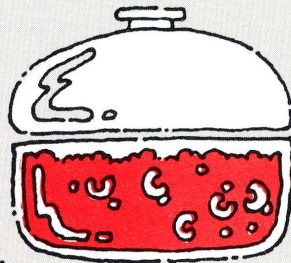
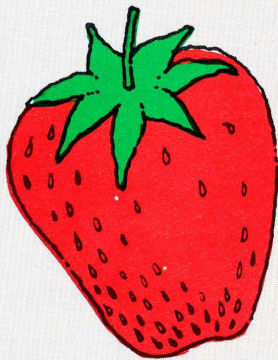
The answer is protein. Protein is found in all these foods (peanut butter, dried beans, poultry, meat, cheese, fish and nuts). It is also found in eggs, grains, milk and other dairy products. Protein aids growth and helps body cells remain healthy. It also helps you resist disease.

Potato Puzzler (page 28)



Connecting the Facts (page 37)

1. time	M	P	N	R	I	E	W	A	T	T	S	T	F	O	X
2. molecules	V	S	C	A	L	C	I	U	M	Z	T	X	E	T	C
3. calcium	I	T	Q	P	Y	A	L	S	Y	N	A	D	J	P	U
4. safe	T	I	S	R	R	B	C	O	X	D	N	L	K	R	D
5. watts	A	R	R	A	N	G	I	N	G	M	D	T	M	O	K
6. full power	M	R	I	F	I	M	W	K	X	A	I	K	L	T	L
7. iron	I	I	D	F	U	O	H	M	G	N	N	J	A	E	I
8. standing	N	N	G	T	P	L	W	V	V	I	G	R	S	I	N
9. protein	C	G	X	S	Z	E	L	C	O	V	E	R	I	N	G
10. stirring	X	S	A	M	Q	C	T	P	A	T	S	D	R	C	A
11. pierce	A	T	L	E	U	U	V	I	O	U	A	F	O	F	S
12. arranging	N	Y	P	T	G	L	J	Z	M	W	F	A	N	R	P
13. metal	R	O	T	A	T	E	O	D	W	E	E	B	Z	S	A
14. covering	B	O	N	L	X	S	N	C	P	I	E	R	C	E	F
15. rotate															
16. vitamin C															



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