

MAKING A BOX OVEN

(Simple Model)

I have heard of many ways to make a box oven. This one is a simple, easy method, which gives you a good basic oven for starters. As you become more confident with your box oven skills, you can then build your own, custom oven.

First, select a good sturdy box. A good starting box is about the size of a printing paper box or lid to a banana box. Heavy moving boxes about the same size work great. Do not start with a large box. If your box has holes in it, I like to plug with pieces of cardboard cut from another box. Tape the cardboard cutout in place with duct tape. **DO NOT USE PLASTIC PACKING TAPE.** Plastic tapes will melt. Plugging holes will help prevent you from putting your finger through the aluminum foil once the box is wrapped.

Using a heavy-duty roll of foil (I like the wide stuff) start covering the box, shiny side out. I usually start from the middle of the top of the box with foil about 1 inch over the edge and work width wise first (see Figure 1) and hold foil down with tape. Work down the side and into box. Make sure that your foil lays flat and you do not puncture the foil. Mold the foil into the side and corner seams as you go. Continue wrapping until you have reached the edge of the foil. Overlap foil edge by about 1 inch and tape.

(NOTE: Some people only foil the inside of the box. This will work but covering the entire box makes it less likely to get burnt by hot ashes or coals.).

Start your next piece of foil by overlapping the first piece by 2 inches or more based on the size foil being used. Repeat until the width of the box is completely covered. Repeat this step running the foil the length of the box, making sure every exposed piece of cardboard is covered. If there is any cardboard exposed on the inside of the oven, it will burn. Do not use any tape on the inside of the box. Tape can be used to hold foil in place on the outside only.

Your box oven is now ready. You may want to add handles or a rack to your next box oven. But that's for another day.

BOX OVEN OPERATION

So, you want to work a box oven and you don't know how. Well, sit back and read on cause by the time I'm done, you'll be cooking up a storm.

Once you have your box oven made, you will also need the following items.

1. four empty soda cans
2. stainless steel cookie sheet (you can use Teflon or non stick but it could get scratched because of outdoor handling).
3. charcoal (get a good brand as it burns better)
4. brick or foil wrapped block of wood about the same size
5. tongs to lift and place coals
6. hot pad mittens to lift box
7. ingredients and utensils to make whatever it is you are making

Now that you have all your stuff, let's get cooking.

Step 1: Determine how many coals are going to be needed. The average rule of thumb is that each coal will give off about 20 degrees F of heat each. Having taken higher math in college, this tells me that if I need to bake at 350 degrees F, I need to divide 350 by 20. The answer, 17 1/2 is the number of coals that will be needed (be brave, use 18 coals, cutting a coal in half gets messy). On really hot days and cooking in the sunlight, you may want to use one or two less, on cold days, use one or two more. It also makes sense that the larger the box, the more coals are needed. I bought one of those sit in the oven temperature gages and put it in the oven as checked the temp. this gave me a good idea on number of coals needed.

Step 2: Get coals going. Remember BSA regulations say that NO liquid starters may be used. I like to use a charcoal chimney. Count out the number of coals needed and add a few extras. Coals need to be completely white for proper cooking. This will take about 20 minutes to happen using a charcoal chimney. While coals are starting, fill the four empty soda cans _ full with water, sand or pebbles. These will be used as legs for your cookie sheet.

Step 3: Before the coals are ready; you should prepare whatever it is you are going to bake. So get busy.

Step 4: In the fire ring, place the four filled soda cans so that they fully support the cookie sheet at the four corners. If you want, you can add two cans on each side in the middle for more support. (NOTE: If you are baking in a casserole dish, place the casserole dish on the cans. Coals can be spread out. Coals do not have to be under the dish for the oven to bake properly).

Step 5: Once coals are ready, place coals, using tongs, in the middle of the cans. Spread the coals out so they are just touching each other.

Step 6: Place cookie sheet with whatever on top of cans. Place box oven over cookie sheet. Place brick (or foil covered block) under the front lip of the box oven. This allows air to get it for the coals.

Congratulations, you are now baking in your box oven. Wasn't that easy? Here are some helpful hints.

Hint 1: When you lift the box to check to see how things are cooking, use your glove mittens. The box will be hot.

Hint 2: Don't lift your box too often. This allows the heat to escape.

Hint 3: If you are going to be cooking over an extended period of time, you may need to add coals. Coals are usually good for about 1 hour of cooking. If your dish will take longer or you are doing several dishes, you should start another set of coals prior to running out so they will be ready about 45 minutes into your cook cycle. Add new coals as required. (NOTE: This is a trial and error process so the more you cook with your box oven, the better you will get at judging.)

Hint 4 If it is windy, be careful when installing and removing your box oven. Ashes may fly when hit by high winds, which can be a fire hazard. The ashes may also get on your food. Try to set up your cooking area in a non-windy place or try to set up a wind block so the wind does not hit the coals.

Hint 5 When selecting a cookie sheet to use, make sure that there is at least 2" between each side of the cookie sheet and the box. This will allow for proper airflow.

Fun in the Kitchen

KITCHEN EXPERIMENTS

Make Your Own Magic Rainbow

Milk is the main ingredient in this exciting science trick. It will entertain you with a swirling display of colors and patterns that will last for several minutes. You can repeat this trick many times, and each time the results will be different. Just like a kaleidoscope, the design will change right before your eyes.

Materials needed: a shallow dish or pie plate, one cup of whole milk, food coloring (red, blue and yellow or 3 colors of your choice), a few drops of liquid dish detergent.

Pour the milk into a shallow dish and let it sit until it has warmed to room temperature. (The experiment will not work quite as well if the milk is cold.) Squeeze several drops of food coloring into different areas of the dish. Alternate colors for best results.

Hold the bottle of liquid dish detergent over the dish and squeeze gently so that a few drops of detergent will drip into the milk.

Like magic, the milk will start churning and swirling, mixing the colors into beautiful designs. The swirling will continue for about 5 to 10 minutes, gradually slowing down. Adding a few more drops of detergent will make it last longer.

Explanation: This experiment works because the detergent will not mix with the milk, so it "pushes" the milk out of the way, causing it to swirl. This swirling action mixes the food coloring to make the rainbow of colors.

One final reminder: When you have finished the experiment, dump the rainbow milk down the sink drain so no one drinks it

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Turn Milk into Plastic

ADULT SUPERVISION IS REQUIRED

Many plastics are made from petroleum oil. Oil formed in rocks over millions of years from the bodies of billions of small sea creatures. You can make a similar "plastic" in a few minutes using milk, another organic substance:

Equipment: Heavy cream, saucepan, and vinegar.

Ask an adult to warm some heavy cream in a pot. When it is just simmering, slowly stir in a few teaspoons of vinegar. The acidic chemicals in the vinegar react with the organic mild chemicals. Keep stirring until it becomes rubbery. Let it cool and wash it under running water. You have your own plastic.

Stuff like Gak

Make a material that you can shape, make balls and have lots of fun. Kids of all ages will have fun with this one!

What you need:

White school glue
Optional food coloring
2 clear cups water

borax
spoons for measuring mixing

What to do

- 1. Dissolve 1/2 teaspoon Borax in 1/2 cup of water**
- 2. Pour 1/3 cup of glue into the water and Borax. Food coloring is optional**
- 3. Stir the mixture and remove it from the cup**
- 4. Observe the properties of GAK**
- 5. Experiment with different amounts of Borax and examine different properties.**

FUN FOOD

Gummi Fish

Mix gelatin up according to the package, in a clear "gold fish" bowl. Chill in the fridge until the gelatin is thickened, but not solid. Stir in gummi fish.

Tropical Island Slush

5 Cups water
4 Cups sugar
One 12 ounce can frozen orange juice concentrate
One 46 ounce can pineapple juice
5 mashed bananas
Two 2-liter bottles of lemon-lime soda

Bring the water and sugar to a boil. Remove from heat and cool. Add juices and bananas. Freeze. Take out of the freezer two hours before serving. Serve with two 2-liter bottles of chilled lemon-lime soda.

Submarine sandwiches

Loaf of French bread, sliced meats, sliced cheeses, sliced fresh vegetables, Italian dressing

Cut French bread in half. Layer on meat, cheeses, and vegetables. Sprinkle with Italian dressing. Cut into individual portions.

80 Foot Banana Split

The last few days here in Alabama have been in the 90's. Ice cream is sounding pretty good right now, so I thought I would include this recipe I found.

Take 160 boys, 80 feet of rainguttering, 17 gallons of ice cream, 30 bananas, 5 cans of whipped topping, and 5 large jars of maraschino cherries and what do you have? An 80-foot banana split! Here's how you do it. Fasten together 80 feet of raingutter with duct tape. Line the inside of the raingutter with one length of aluminum foil. Fill with sliced bananas, dozens of scoops of ice cream, whipped topping and cherries. (Be sure to save some of the ice cream and topping for the leaders to enjoy later.) Furnish each boy with a plastic spoon, and caution them to turn their billed caps backwards. Line the boys up on either side of the ice cream filled raingutter with instructions that spoons are to be held high in the air until the signal "GO". When you're ready give the signal and stand back! The ice cream will disappear in minutes. This is an exiting after lunch treat. Don't forget to have some type of water supply handy so the ice cream covered boys can wash up.

-- Thanks to Scouters in the Miami Valley Council

Unbaked Peanut Butter Cookies

3/4 Cup sugar
1 stick of butter
1 teaspoon pure vanilla extract
3/4 cup Karo syrup (light)
3/4 cup peanut butter
4 cups corn flakes cereal

Mix together sugar, butter and Karo syrup. Cook in saucepan on medium heat until boiling. Boil for 3 minutes. Add cereal and mix thoroughly. Drop by Tablespoons on baking sheet. Allow to cool.

Yield: enough for 15 - 20 people of 1 - 2 snackin' dudes.

-- Thanks to Scouters in the Denver Area Council

Thumbprint Cookies

Ingredients:
3/4 cup shortening

**1/2 cup packed brown sugar
1/2 cup peanut butter
1 3/4 cups all-purpose flour
1 teaspoon vanilla extract
1 egg 1/2 teaspoon salt**

Directions: 1. Preheat oven to 350 degrees F. 2. In a large mixing bowl, cream the shortening and sugar. Blend in peanut butter, salt, egg, vanilla and flour. Mix well. 3. Shape dough into balls about 1 inch in diameter. Press your thumb in the center of the ball, creating a 1/2 inch depression. 4. Bake for 12 to 15 minutes and cool on a rack. Fill the centers with a tart jelly/fruit preserve. Makes 3 dozen

Ghost Cookies

**6 ounces vanilla flavored almond bark
15 1/2 ounce package Nutter Butter cookies
Small black jelly beans (or purple)**

Melt almond bark following package directions. Dip 2/3 of each cookie in melted candy. Shake gently to remove excess coating. Place on wire rack with waxed paper underneath. For eyes cut jellybeans in half and place on cookies. Cool completely before removing from rack.

-- Thanks to Scouters in the Trapper Trails Council

Chocolate Spiders

**12 ounces Twizzlers, chocolate flavor
4 ounces milk chocolate candy melts**

Cut twizzlers into 1 1/2" pieces. Slice each piece in half lengthwise. On waxed paper place 4 legs (pieces) on each side and then drop 1 teaspoon melted candy in the middle for the body. Use a toothpick to smooth uniform circle and connect all candy pieces. Cool completely before removing from the waxed paper.

Suggestion from Chris-- Almond or chocolate bark can typically be found in the aisle with cake making supplies in your grocery store. I also found it at Wal-Mart. You can also buy candy melts (basically the same thing, different shape, little higher cost) at cake and candy supply stores and craft stores. Call your local store to see who has it. I always melt the bark on low

(Power level 3) of my microwave in a glass pie pan. It takes a little bit longer, but the bark will melt smoothly, without lumps. If you don't have a microwave, an electric skillet with water in the bottom can be used. Set the control at the lowest heat possible. Experiment, but I remember from candy-making classes I took years ago, that melting candy bark or melts is best done at low temperatures.

-- Thanks to Scouters in the Trapper Trails Council

Fred's Trail Mix

1 Bag (large) Eagle brand Snack mix
1 16 oz. bag M&Ms
1 8 oz. bag semi-sweet mini M&Ms (cooking section of grocery store)
1 24 oz. can raisins (use as much as you think you need)
1 can mixed nuts (Adjust quantities to taste - this will get you started!)

This makes enough for a group of 6 for a weekend

-- Thanks to Fred Feltmann, Greater Alabama Council

Cranberries?

Did you know that the Pilgrims gave the cranberry its name? They thought the pink cranberry blossoms resembled the heads of cranes, so they called them "Crane berries." This was later changed slightly to "cranberries."

Look up pictures of cranes and the cranberry bogs of New England. During your den meeting, make fresh cranberry bread for your den snack.

-- Thanks to Scouters in the Viking Council

Spoon Fudge

Serving Size : 16

Ingredients:

1- Gallon size ZipLoc (tm) plastic bag
1 lb. powdered sugar
1 cube butter (1/4 lb.)

**1- 3oz. cube of cream cheese
1/2 tsp. vanilla
1/4 to 1/2 cup of cocoa**

Place all the ingredients in the ziploc bag and squeeze out all the air. Squish and smoosh the bag until all the ingredients are well mixed and there is a creamy consistency. Add any favorite flavors or stuff (raisins, peanut butter, etc.

Take a spoon and enjoy

No-Bake Cookies

**1/4 cup butter or margarine
1/2 cup peanut butter
1/4 cup maple flavored syrup
2 tablespoons firmly packed light brown sugar
3 cups coarsely crushed Quaker 100% Natural Cereal, original flavor**

Combine all ingredients except cereal in 1 quart saucepan; bring to a boil. Simmer over medium heat about 3 minutes, stirring constantly. Pour over cereal; mix well. Press into greased 8" square baking pan. Chill until firm; cut into bars. Store in refrigerator.