



FAMILY LEARNING ACTIVITIES

Chocolate Macarons with
Coffee Ganache
September 6, 2020



COOKING TECHNIQUES FOR KIDS

How can kids help in the kitchen?

If you're cooking with kids, you know best what they're ready for based on their level of maturity and motor control. The National Association for the Education of Young Children recommends the following:

Ages 2-3 might be ready for stirring, shaking, spreading, tearing, dipping, kneading and using basic kitchen implements like whisks, spatulas, strainers, or cookie cutters. Kids age 3-4 might be ready for more complex tasks like pouring, rolling or measuring, and with supervision they might try using small non-electric appliances. Kids older than five can do just about anything with supervision -- grating, mashing, peeling, even cutting with a knife.

SAFETY FIRST!

- Supervision is key! Don't leave little ones unattended while cooking.
- Keep potentially dangerous equipment stored until you're ready to use it.
- Sharp knives are safer because they are easier to control -- keep your knives sharp, but out of reach until needed and supervise carefully!
- Make sure you have plenty of potholders around; keep them dry and away from burners.
- Be careful with electric appliances, cords, and electrical outlets
- In case of a stove top fire, use a fire extinguisher or baking soda, NOT WATER as it can spread a grease fire quickly. You can also use a lid to smother flames.
- Make sure your helpers know what's hot -- lids, handles, and utensils all heat up when the stove is in use, and releasing steam can cause severe burns.
- Prevent food-borne illness: wash hands frequently, keep hot food hot and cold food cold; wash fruits and vegetable thoroughly, and cook meat, poultry, eggs and fish to the appropriate temperature.

LET'S TALK ABOUT FOOD!

FIVE SENSES OF FOOD

A way to explore new foods with picky eaters! Prepare and sample a new food and describe it using your five senses.

This activity works with individual foods, or two-three foods at a time to make comparisons, like:

- Different foods from the same food group, like three nuts or three fruits
- Things that look similar but taste different, like papaya and sweet potato
- The same vegetable, served raw and cooked in different ways, like roasted, steamed, or sauteed

Sight: What color is it? Is big or small? Does it look different after you cook it? How so? Is there something about the way it looks that makes you want to eat it? Does it look like other foods that you've tried?

Sound: What does it sound like when you cut it? When you cook it? When you chew it?

Smell: What does it smell like? Does it smell like it tastes? Does it smell like other foods that you've tried?

Touch: What does it feel like when you touch it? Is it dry or greasy or slimy? Rough or smooth? What does it feel like in your mouth? Is it squishy or crunchy? Does it stick to the roof of your mouth or get stuck in your teeth?

Taste: Does it taste like you expected? Is it sweet? Spicy? Sour? Salty? Does the flavor remind you of something else?

COOKING CONVERSATIONS

Ask open-ended questions about what's happening in the kitchen:

Make comparisons between ingredients: *"Dried basil and dried oregano look the same, but how are they different?"*

Apply past knowledge: *"What happened when we boiled noodles? Will the same happen with rice?"*

Make predictions: *"What will happen to the cheese when we put it in the microwave?"*

Look for creative solutions: *"What can we do with this leftover sauce?"*

Solve problems: *"How can we pour this without spilling?"*

COOKING JOURNAL

For each stop on the Circle Food Tour, we'll give you a few things to write or talk about for each dish.

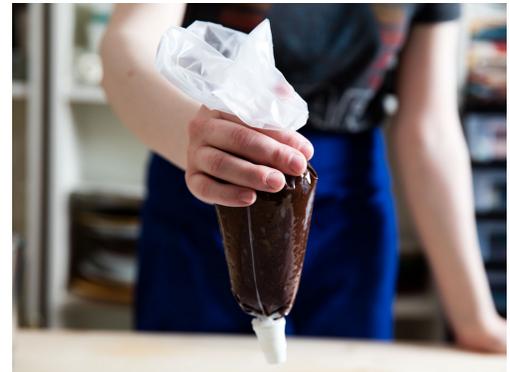
WHILE YOU'RE COOKING

- How do the cream and corn syrup change after you infuse the coffee? You can taste, smell or see the difference. What does that tell you?
- What does the hot cream mixture do to the chocolate?
- Taste the finished ganache. As it sits, what happens? Why doesn't the chocolate get hard again as it cools?
- Why do you think you need to sift the dry ingredients? What are some ways that might change your result?
- How much space do the egg whites take up before beating? How much after? If you use a glass bowl, you can measure their height before and after.
- Why do you think its important to fold the dry ingredients into the meringue?
- As the macarons bake, they develop a little ring around the bottom. What do you think is happening?

TIPS AND TRICKS

Filling a pastry bag can be tricky, but you can watch a quick video for a no mess technique from *Serious Eats* here:

<https://tinyurl.com/Piping-Bag-Tips>



WHILE YOU'RE EATING

- How does it look? Is it pretty? What colors do you see? Does the way it looks make you want to eat it, or not?
- How does it smell? Does the way it smells make you want to eat it, or not?
- Now take a bite. What individual ingredients can you identify by smell or taste? What do you like or not like like about the way it tastes?
- How's the texture? Is it smooth? Creamy? Crunchy? Soft? What do you like or not like about the way it feels in your mouth?

WHAT'S COOKING?

MACARONS

Macarons are a French sandwich cookie made from almond meringue. The name *macaron* comes from the Italian word *maccherone*, which means "fine paste," which is what the batter will look like before they're baked.



Macarons

Macarons may seem like a new thing, but they've been around a long time. The earliest records seem to come from a monastery in Cormery, France in 1791.

Catherine de Medici introduced them to France when she married King Henri II in 1533. The recipe first appeared in America in *Martha Washington's Booke of Cookery*, which featured the recipes of America's first first lady.



Martha Washington



Catherine de Medici



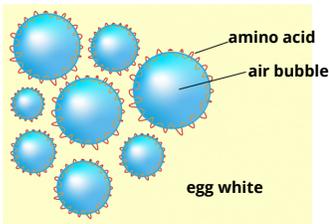
La Maison Laduree, Paris

The macarons we know today were created in the 1830s, when pastry chef Pierre Desfontaines Laduree sandwiched a sticky filling between two crisp meringue cookies. The family's Paris tea room has been serving macarons there and all over the world since 1862!

WHAT IS MERINGUE?

When you whisk egg whites, you create foam by adding air, which creates bubbles. At the same time, the wires of the whisk cause some of the proteins to unravel. This is called "denaturing."

Denaturing exposes some of the amino acids, which move to the air bubbles to get away from the water in the egg white. As proteins coat the air bubbles, the amino acids react with each other, and they link together to form nets, which keeps the bubbles from popping.



The protein-wrapped bubbles aren't strong enough stand on their own. Food scientists believe that sugar helps more proteins gather on the surface of the air bubbles, making the bubbles even more stable. When sugar is added, it strengthens the bubbles and creates the stiff peaks and keep the bubbles from collapsing.

CHOCOLATE and COCOA

Cocoa and chocolate are two by-products of the cacao tree, *Theobroma cacao*, and its beans. Cacao beans are fermented, roasted, shelled, ground, and turned into paste, which can then be made into either cocoa or chocolate. *Cocoa* is the name associated with a powdered substance after the cacao beans are processed to remove the cocoa butter, then ground into powder. However, in *chocolate*, the cocoa butter is added back after fermenting the beans. The cocoa butter contributes to the smoother and richer consistency of chocolate.

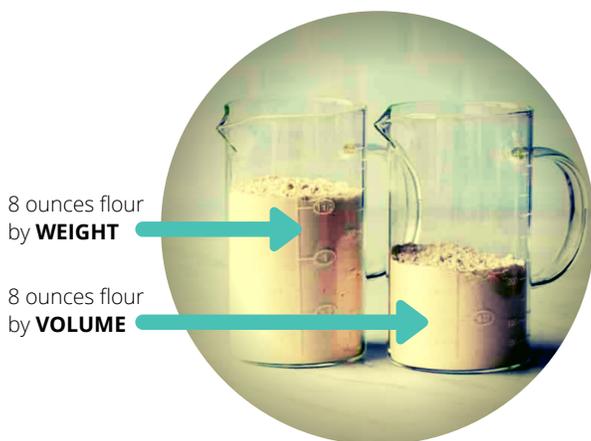
Learn more about how chocolate is made in this video from *Tasty*:

<https://www.youtube.com/watch?v=xPe1jMuX32s>

TIPS and TRICKS: Baking by Weight

Baking is a science! When baking, you want to be as precise as possible, and that means measuring ingredients by weight.

Volume is a measure of the amount of space something takes up. Things like cups of flour, gallons of milk... these are all volume measurements. **Weight** is a measurement of an object's heaviness. Grams of salt, pounds of sugar, kilograms of apples... these are measurements of weight.



A pound of feathers may weigh the same as a pound of lead, but they take up different amounts of space. That's why it's a good idea to weigh your ingredients -- a cup of water may weigh 8 ounces, but a cup of flour only weighs a little over 4 ounces.

Why use grams? Grams are a measure of weight (like ounces) used in the metric system. They're smaller than ounces and will give you the most precise measurement, which is important in baking.

MEASURING CUP FRACTIONS CHALLENGE

Use water to practice with measuring cups and learn about fractions!

Fill a dish tub or bucket with water, and try to create the amounts given below using your measuring cups at home. Have kids measure various amounts using different combinations of their measuring cups. They can keep track of their work by writing fraction addition equations in the space below each question.

Fill a clear liquid measuring cup like the one shown below to see your progress!
Suggestion: Have kids record their solutions on a piece of paper.



MEASURING CUP CHALLENGE: QUESTIONS

1. How could you make 1 cup using the $\frac{1}{4}$ and $\frac{1}{2}$ measuring cups?
2. How could you make 1 cup using the $\frac{1}{3}$ and $\frac{1}{2}$ measuring cups?
3. How could you make 1 cup using the $\frac{1}{4}$ and $\frac{1}{3}$ measuring cups?
4. How could you make 2 cups using any of the other measuring cups?
Find as many ways as possible.
5. Find two ways of making $\frac{3}{4}$ cup.
6. Bonus challenge: How is the $\frac{1}{3}$ cup measure different from the others?

MEASURING CUP FRACTIONS CHALLENGE

ANSWERS

1. How could you make 1 cup using the 1/4 and 1/2 measuring cups?

$$1/2 + 1/2 = 1 \text{ cup}$$

$$1/2 + 1/4 + 1/4 = 1 \text{ cup}$$

$$1/4 + 1/4 + 1/4 + 1/4 = 1 \text{ cup}$$

2. How could you make 1 cup using the 1/3 and 1/2 measuring cups?

$$1/2 + 1/2 = 1 \text{ cup}$$

$$1/3 + 1/3 + 1/3 = 1 \text{ cup}$$

3. How could you make 1 cup using the 1/4 and 1/3 measuring cups?

$$1/4 + 1/4 + 1/4 + 1/4 = 1 \text{ cup}$$

$$1/2 + 1/4 + 1/4 = 1 \text{ cup}$$

4. How could you make 2 cups using any of the other measuring cups? Find as many ways as possible.

$$1 + 1 = 2 \text{ cups}$$

$$1 + 1/2 + 1/2 = 2 \text{ cups}$$

$$1 + 1/2 + 1/4 + 1/4 = 2 \text{ cups}$$

$$1/2 + 1/4 + 1/4 + 1/4 + 1/4 + 1/4 + 1/4 = 2 \text{ cups}$$

$$1/4 + 1/4 + 1/4 + 1/4 + 1/4 + 1/4 + 1/4 + 1/4 = 2 \text{ cups}$$

$$1/3 + 1/3 + 1/3 + 1/3 + 1/3 + 1/3 = 2 \text{ cups}$$

5. Challenge: Find two ways of making 3/4 cup.

$$1/2 + 1/4 = 3/4 \text{ cup}$$

$$1/4 + 1/4 + 1/4 = 3/4 \text{ cup}$$

WHAT IS MYPLATE?

MyPlate, from the US Department of Agriculture, is a way to find your healthy eating style and build it throughout your lifetime.

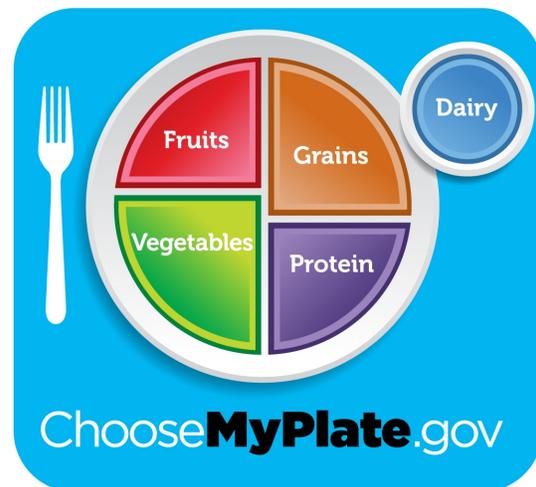
Everything you eat and drink matters. The right mix can help you be healthier now and in the future. This means:

- Focus on variety, amount, and nutrition.
- Choose foods and beverages with less saturated fat, sodium, and added sugars.
- Start with small changes to build healthier eating styles.
- Support healthy eating for everyone.

Eating healthy is a journey shaped by many factors, including our stage of life, situations, preferences, access to food, culture, traditions, and the personal decisions we make over time. All your food and beverage choices count. MyPlate offers ideas and tips to help you create a healthier eating style that meets your individual needs and improves your health. Go to choosemyplate.gov for more information, activities and worksheets on healthy eating.

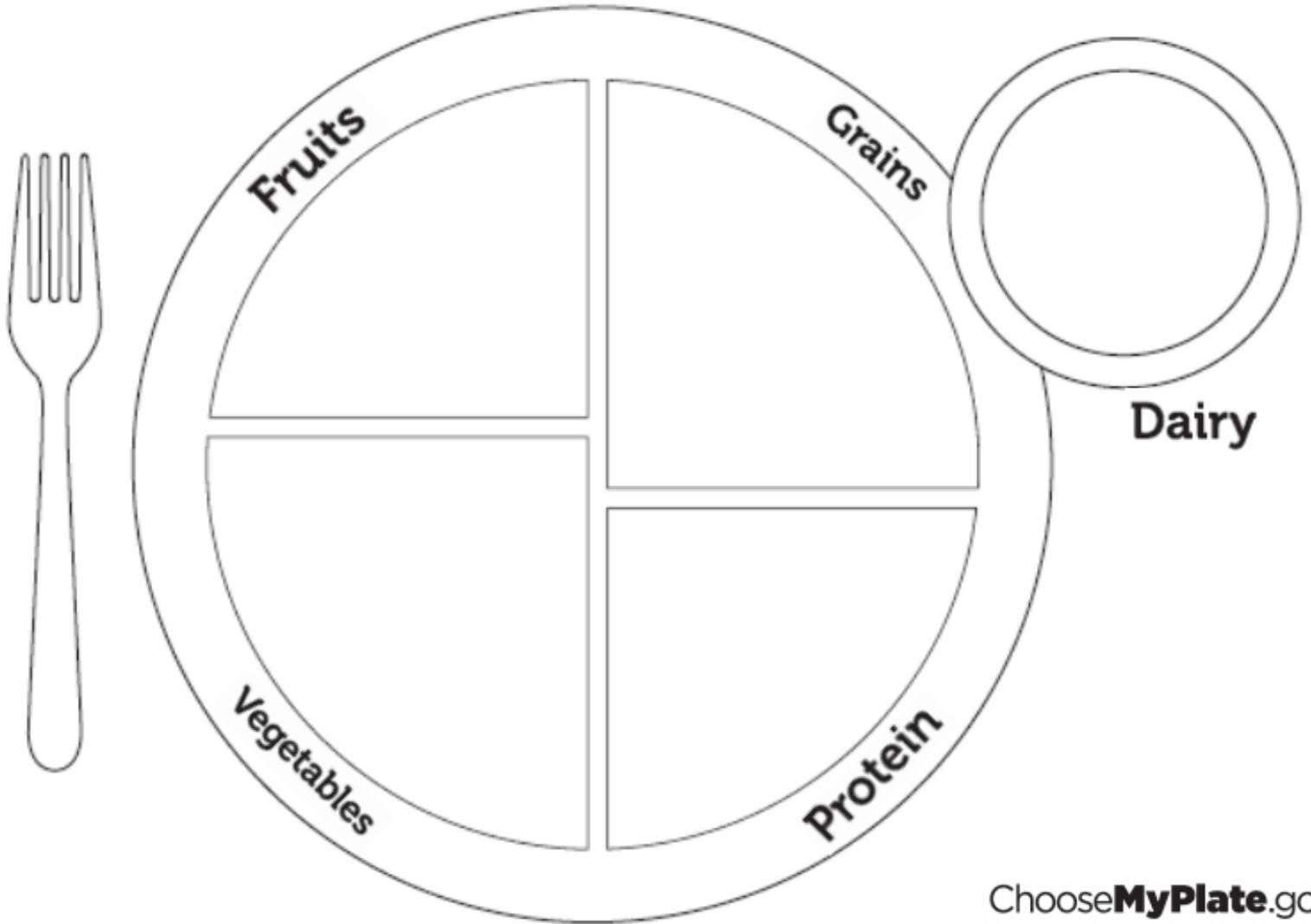
WHAT'S ON MYPLATE?

- Any fruit or 100% fruit juice counts as part of the Fruit Group. Fruits may be fresh, canned, frozen, or dried, and may be whole, cut-up, or pureed.
- Any vegetable or 100% vegetable juice counts as a member of the Vegetable Group. Vegetables may be raw or cooked; fresh, frozen, canned, or dried/dehydrated; and may be whole, cut-up, or mashed.
- Any food made from wheat, rice, oats, cornmeal, barley or another cereal grain is a grain product. Bread, pasta, oatmeal, breakfast cereals, tortillas, and grits are examples of grain products. Grains are divided into 2 subgroups, Whole Grains and Refined Grains.
- All fluid milk products and many foods made from milk are considered part of this food group. Foods made from milk that retain their calcium content (like cheese and yogurt) are part of the group. Foods made from milk that have little to no calcium, such as cream cheese, cream, and butter, are not. Calcium-fortified soymilk (soy beverage) is also part of the Dairy Group.
- All foods made from meat, poultry, seafood, beans and peas, eggs, processed soy products, nuts, and seeds are considered part of the Protein Foods Group.



WHAT'S YOUR FAVORITE PLATE?

Use the space below to draw your favorites from each of the MyPlate groups!



Choose **MyPlate**.gov