

LEVELED BOOK • 0

All About Chocolate



**Multi
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O•R•U**

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Introduction

People around the world love chocolate. They love it so much that every year they eat more chocolate than any other sweet. If you have ever wondered where chocolate comes from and how it's made, then read on.

Where Chocolate Comes From

Chocolate actually grows on trees. But you can't just pick a chunk of chocolate from a tree branch and eat it. The chocolate growing on trees looks, tastes, and smells nothing like the chocolate you eat.

The tree that gives us chocolate is the **cacao** (kah-KOW) tree. Chocolate comes from beans that are found in large pods on the tree. Cacao trees grow where it is hot and wet. Mostly, they grow near the equator. It takes four to five years before a cacao tree begins to grow pods.



The shaded areas of the map show where cacao trees grow close to the equator, where it is hot.



Cacao trees grow in the wild, as well as on plantations.

Today, most cacao trees are grown on farms called **plantations**. Cacao trees have lots of small white or yellow flowers. Some of the flowers change into pods, but most do not.

The pods are shaped like little footballs. Workers trim the branches to get the most pods from the trees. The pods change from green to a golden or reddish color as they ripen.



These pods contain the beans that will be used to make chocolate.



A harvester cracks open cacao pods to get at the seeds.

Preparing the Beans

Taking ripe pods from the cacao trees is the first step in making chocolate. Inside each pod are 20 to 50 beans. The cacao beans are the tree's seeds. It takes a lot of beans and a lot of work to make chocolate. The pods are first gathered and then cut open with a large blade.

The beans are then scooped out of the open pod. The beans are cream colored and covered with a soft pulp. These beans are still very different from the chocolate you know.



This is what the inside of a cacao tree pod looks like.



A worker spreads the cacao beans so they can dry and then begin the fermentation process.

The pulp-covered beans are put into piles or boxes and covered. They begin to change from a cream color to a purple color after contact with the air. The beans also change on the inside in a process called **fermentation**.

After the beans have fermented, they are dried. As they dry, the beans are turned. Once the beans are dry, they are placed in large cloth bags and shipped to makers of chocolate.



Workers spread cacao beans to dry in the sun.

From Beans to Chocolate

Making chocolate from the fermented, dried beans is a complicated process. First, the beans need to be cleaned. Then, chocolate makers blend different kinds of beans together. This is to make sure the chocolate has just the right flavor.

The beans are roasted in order to bring out the chocolate flavor. This is when the beans begin to smell like chocolate. As the beans are roasted, the thin shell that covers them grows brittle. The beans pass through a machine that cracks their shells and blows away the pieces of shell with fans.



Beans roast in giant drums at a candy factory.

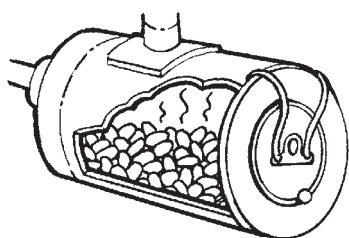
After the shells are removed, only the meaty part of the bean, called the *nib*, remains. The nibs are ground up and crushed until they become a liquid. The liquid is poured into molds where it cools into bars of bitter, unsweetened chocolate. The bars are then pressed until a yellow liquid, called *cocoa butter*, is removed. The cocoa butter drains through a screen and is collected to make the chocolate we eat.

After the liquid cocoa butter is removed, the solid part of the bar is ground into a powder. Cocoa powder is sent to dairies and bakeries to flavor baked goods and dairy products.

Packaged for
shipping

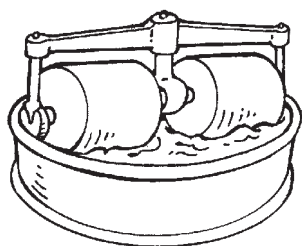
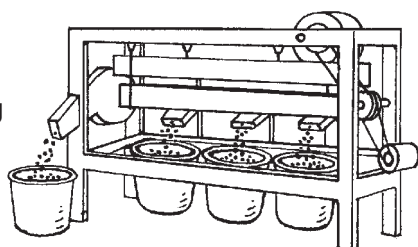


The chocolate we eat is made in the final step of mixing. The mixing takes place in machines with big rollers. Sugar, cocoa powder, cocoa butter, and other **ingredients** are rolled and mixed until smooth. The smooth mixture is poured into molds and cooled. After it has cooled and solidified, the chocolate is wrapped in packages for shipping.



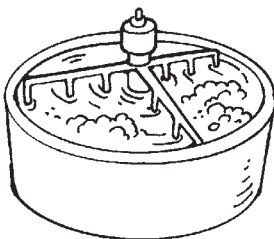
1. Roasting

2. Shelling

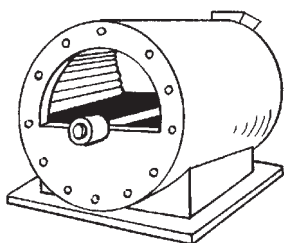


3. Grinding

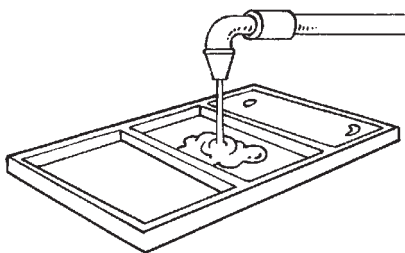
4. Mixing



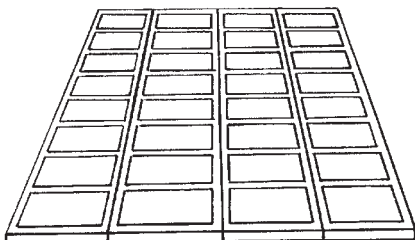
5. Smoothing



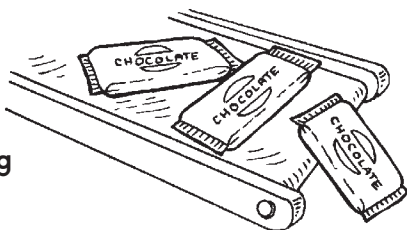
6. Pouring



7. Cooling



8. Wrapping



History of Chocolate



200 — People in Mexico and Central America first use chocolate.

1502 — Christopher Columbus brings cacao beans back to Europe.

1657 — First chocolate shop opens in London, England.

1847 — First chocolate bar is sold.

1875 — A man in Switzerland makes and sells the first milk chocolate.

2007 — World consumes over 3,000,000 metric tons of cacao beans.

Chocolate Today

Most of the chocolate made in factories today is used to make chocolate candy. Other chocolate goes into ice cream, chocolate drinks, and baked goods such as cakes and doughnuts. Each year people around the world **consume**, or eat, tons of chocolate.

Amount of Chocolate Eaten Per Person Each Year by Country			
1	Switzerland	22.4 lbs	10.1 kg
2	Austria	20.1 lbs	9.1 kg
3	Ireland	19.5 lbs	8.8 kg
4	Germany	18.0 lbs	8.2 kg
5	Norway	17.9 lbs	8.1 kg
6	Denmark	17.7 lbs	8.0 kg
7	United Kingdom	17.5 lbs	7.9 kg
8	Belgium	13.2 lbs	6.0 kg
9	Australia	13.0 lbs	5.9 kg
10	Sweden	12.9 lbs	5.8 kg

Try This!

Yummy Chocolate Brownies

Make sure you have an adult to help you with any cutting or handling of hot foods.

- 1** Gather these ingredients:

- 1 cup butter or margarine
- 4 squares (1 oz. each) of unsweetened chocolate (also called baker's chocolate)
- 4 eggs
- 2 cups white sugar
- 2 teaspoons vanilla extract
- 1 ½ cups all-purpose flour
- 1 teaspoon baking powder
- pinch of salt



- 2** Preheat the oven to 350°F (180°C). Rub grease over a 9x13-inch (15-cup) baking pan.
- 3** Melt the butter in a saucepan over medium heat on the stovetop. After the butter is melted, take it off the heat and stir in the chocolate until it is melted and mixed in. Add the eggs one at a time, stirring thoroughly. Then add the sugar and vanilla, stirring the mixture until smooth.
- 4** In a separate bowl, mix the flour, salt, and baking powder. Gently pour the butter, chocolate, and sugar mix into the flour and stir it until the flour is completely wet.
- 5** Pour the mixture into the baking pan and spread it evenly.
- 6** Bake for 25 to 30 minutes until the brownies begin to pull away from the sides of the pan.
- 7** Let the brownies cool in the pan before you cut them. Makes 12 brownies.



The next time you eat chocolate, think about how it was made.

Conclusion

It took a long time for chocolate to become popular throughout the world. Today, people everywhere eat lots of chocolate, making it the world's most popular sweet.

Glossary

cacao (<i>n.</i>)	the tree from which we get chocolate (p. 5)
consume (<i>v.</i>)	eat or buy (p. 17)
fermentation (<i>n.</i>)	a natural changing process that occurs in many foods and plants (p. 10)
ingredients (<i>n.</i>)	the different food items that go into a dish or recipe (p. 14)
plantations (<i>n.</i>)	large farms with many workers (p. 6)

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Special thanks to Nadia Larsen of Choc-alot in Tucson, Arizona.

All About Chocolate
Level O Leveled Book
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Word Count: 678



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