

Did You Know That Chocolate Grows on Trees?

Objectives

As a result of this lesson, students will be able to:

- identify the area of the world in which cacao originates and prospers.
 - trace the history of chocolate.
 - describe the process by which fruit becomes chocolate.
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Materials

- Student Handout: **Chocolate: A History**
 - Student Handout: **How Chocolate is Made**
 - Student Handout: **Memory Game**
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Activities

1. Unwrap a chocolate candy bar and show it to the class.
 - a. Ask the class if they know where chocolate comes from – where it originates.
 - b. Spend a few minutes discussing the theories that arise among the students, emphasizing the difference between point of origin and place of manufacture.
 - c. Make it a point (if not already brought up in the previous discussion) to talk about the difference between cacao and the coca plant. (Please refer to the following website for information on the coca plant: http://www.transitionsabroad.com/publications/magazine/0605/the_coca_plant_paradox.shtml.)
 2. Distribute the student handout entitled **How Chocolate is Made**. (If the technology is available, you may wish to download the PowerPoint presentation instead from the project website.)
 - a. Emphasize that the handout refers to the manual process observed in Brazil, but the preparation is quite different in the mass production process used in the making of Hershey's chocolates, for example.
 - b. Direct students to examine the initial segments of the handout, "The Cacao Tree" and "First Steps." What does the information reveal about the nature of the cacao plant?
 - c. Ask students to read the section entitled "Beans." Explain that, upon cutting open the pod, the beans are encased in the fruity pulp shown here.
 - d. Direct students to complete the reading of the handout. Ask them if anything surprised them about the making of chocolate based on this manual process.
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**Activities
(continued)**

3. Distribute the student handout entitled **Chocolate: A History**.
 - a. Direct students to read the first four items in the handout: “Origins,” “Meaning,” “Legends,” and “Reverence.”
 - b. Ask students to explain why the Aztecs might revere chocolate. What is its significance?
 - c. Direct students to read the first following item: “Early Use.”
 - d. Ask students to explain why cacao would be a valuable commodity in a barter economy.
 - e. Direct students to read the rest of the handout.
 - f. Ask students to explain the misconceptions the Spanish initially had about chocolate. How do you account for these misconceptions?
 - g. Ask students to explain why the Spanish would want to keep chocolate a secret? How would it have benefited them?
 4. Once students have an understanding of the history of chocolate, the teacher may set up the included **Memory Game** to play in groups to review new information.
 - a. Cut out the squares.
 - b. Turn them over.
 - c. Direct students must match the pairs after memorizing where they are.
 5. **Recommendation.**
 - a. The Mexican sauce called *mole* (pronounced MO-LAY) is made from pure chocolate and spiced with pepper. It is usually used to dress chicken in typical Mexican dishes. If there is an authentic Mexican restaurant near you, it would be an interesting experience for the students to try this dish that is closer to what chocolate began as in Mexico and to get a ‘taste’ of another form of chocolate.
 - b. *Mole* can be bought in many supermarkets or specialty stores and included here is a recipe to try at home :
www.sweatnspice.com/recipes/Mole_Sauce_Recipe.php.
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How Chocolate is Made

Introduction

Today, chocolate is generally prepared in mass production facilities such as those found in Hershey, PA. However, it was originally processed by hand. This manual process is still being used in parts of Brazil.

The Cacao Tree



Cacao trees are only found in hot, rainy, tropical climates. They are very delicate trees and need shelter from the elements when they are beginning as sprouts.

First Steps

Pods begin as blossoms on a tree and grow into a golden-colored fruit. The fruit needs to be picked very carefully due to the fragility of the tree.



Beans

Once the fruit is picked, the seeds – or beans- are removed. One cacao fruit will yield 20-50 beans (400 beans are needed for one pound of chocolate).

**Fermentation**

The beans are removed and left to ferment with some remaining pulp on them. Afterwards, they are left in the sun to dry for several days.



Roasting

After drying, they are cleaned and roasted at @250 degrees for anywhere from 30 minutes to two hours.



Powder

After roasting, the shells are removed and the remaining portion is ground into powder. The powder can be mixed with milk and sugar (at this point it is still very bitter) and heated for hot chocolate or made into solid chocolate.



Chocolate: A History

Origins	The cacao plant is indigenous to the Amazon and Orinoco basin in South America. The earliest known cacao plantation is dated from 600 AD.
Meaning	Chocolate comes from the Aztec word <i>xocoatl</i> and later <i>chocolatl</i> which means “bitter water.” The Aztecs served chocolate cold, in its bitter natural state and with peppery spice.
Legends	The Aztec legend tells that the god Quetzalcóatl came to earth in the morning sunlight and brought with him a stolen cacao plant and showed the Aztecs how to make chocolate.
Reverence	Chocolate was revered by the indigenous cultures as having divine origins and therefore a royal drink. Moctezuma was said to drink up to 50 drinks of chocolate a day.
Early Use	In early history, chocolate was used as a commodity to pay and trade for things.
The Spanish	In 1519, Hernán Cortez visited Moctezuma and discovered chocolate, which was believed to have medicinal uses and was an aphrodisiac.
Transformed	Once Cortez brought chocolate to the Spaniards; they were not fond of the bitter taste and began to add sugar, vanilla, and cinnamon and served it hot.
Spread	The Spaniards kept the secret of chocolate for 100 years, but once the empire began to decline, the secret spread to other European countries like France, Switzerland, Belgium, and Germany who are famous for their chocolates.
In North America	The first chocolate factory appeared in New England in 1765.
Mechanized	In 1828 the invention of the cacao press enabled the cacao butter to be squeezed from the bean and improved the quality of the drink forever.

Memory Game

Year the cocoa press is invented	1828	Year that the first chocolate factory was established in US
1765	Qualities of chocolate before Europeans adapted to their taste	Bitter, spicy
Portion of cacao bean that cocoa press extracted	Cacao butter	Part of the world where cacao originates
Latin America	Year the New York Cocoa Exchange is founded	1925
Aztecs and Mayas	Indigenous people of Central America	

Year of earliest known cacao plantation	600 AD	Xocoatl
Aztec name for chocolate	Plant that chocolate comes from	Cacao
Quetzalcoatl	Aztec god believed to have brought cacao to the people	Spanish explorer that took chocolate to Europe
Moctezuma	Aztec emperor	Countries known for fine chocolate
Switzerland, France, Belgium, Germany	1657	Year that first chocolate house opens in London