

## A Chocolate Tree Grows in Ghana

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1. If someone asked you to describe what chocolate was, what would you say? You could describe what a bar of chocolate looks like, the sweetness of it, and how it melts in your mouth. But what about what chocolate looks like *before* it becomes the candy you know? What about the chocolate bean, the tree it grows on, or the fact that it comes from the rainforest? Most people don't know that much about where chocolate actually comes from, but you are about to learn all about Ghana, the world's second-largest producer of chocolate, and how they grow chocolate trees under the shade of the rainforest canopy.
2. Ghana is located in Western Africa and sits on the Gulf of Guinea right between the countries Côte D'Ivoire and Togo. The Prime Meridian—or 0° Longitude—which divides the Earth into the East and West Hemispheres passes through Ghana, and it's just a few degrees north of the Equator. This makes Ghana closer to the "center" of the world than any other country! Being that close to the equator gives Ghana a hot, tropical climate and creates a perfect environment for a rainforest to grow. Here, you can find many different species of plants and animals; scientists call this biodiversity.
3. Can you name five different languages? How about 47? That is the number of local languages spoken in Ghana—a country the size of the state of Oregon! While the official language is English, most Ghanaians speak at least one local language as well. There are six main ethnic groups in Ghana—the Akan (Ashanti and Fanti), the Ewe, the Ga-Adangbe, the Mole-Dagbani, the Guan, and the Gurma. The different languages are based upon the main language of each ethnic group. As you can see, Ghana has a very diverse human population as well!
4. Ghana's tropical temperatures and heavy rainfall make it an ideal place for a rainforest to flourish! The southern third of the country is very forested, with the thickest rainforest in the southwestern region. The rainy season lasts from March to November in this part of the country, with an average rainfall of 63 inches a year (that's over five feet of rain)! The tropical temperatures combined with the heavy rainfall allows for the many different trees to grow. These trees provide shelter, food and protection for all of the animals who call the rainforest their home.
5. The "big cats" are the top predators in most forests of the world—and the leopard, like the one seen here, is certainly one of them. Its powerful body is about five feet long and its tail adds another three feet! Weighing up to 140 pounds, these solitary cats can be found deep in Ghana's rainforest as well as moving through the grassland. Leopards are nocturnal, hunting at night and sleeping in the sun, but it is though that those in the rainforest are actually crepuscular. Crepuscular means they are most active at dawn and dusk, which is when their rainforest prey is most active. Their golden coat patterned with black rosettes helps to camouflage them while they creep up on their target. In the rainforest, leopards are often a much darker gold, or sometimes even close to black! This helps them blend in with the dense vegetation when hunting or remain hidden high up in treetops. They are the most successful hunters of the cat family. Once they catch their dinner, the leopard will drag it up into a tree for safekeeping—even with a kill three times its weight like a gazelle! Sadly, leopards are endangered despite the legal protection they receive throughout most of their range. The demand for their coat in the black market is still very high, making humans their number one threat.
6. The warthog's most common predators are the big cats, especially lions and leopards. Warthogs prefer to live in wooded savannas and open grasslands where they can graze on the vegetation and dig with their tusks for roots and tubers. They have very poor eyesight though and depend on the warning cry of birds to alert them to flee from predators. In return, these birds often feed on the parasites that live on warthogs. This kind of relationship is called mutualism—both animals benefit from their interaction with the other.
7. African elephants can be found in the savanna and forest regions of Ghana. The elephants that live in the forests are often smaller and darker colored than those on the savanna. Occasionally forest elephants will trample a portion of the forest. When this happens, sunlight comes in through the break in the thick canopy, allowing for underbrush, herbs and creepers to grow. Animals, such as the bongo, depend on areas like this to survive.
8. The bongo is similar to a gazelle and is one of the few large herbivores that live in these dense forested areas. It depends on these breaks in the canopy to provide underbrush for food and shelter. Each animal plays its own role in the life of the rainforest.

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If there were no longer forest elephants, the bongo would suffer too. Without the bongo, the leopard would lose one of its food sources and also be in danger. There is a balance within a rainforest where each species contributes to the life of another. We need to protect these forests and preserve this balance before it's too late!

9. In the evergreen and semi-deciduous forests of southern Ghana there are many tall prominent trees, such as the silk cotton tree on this slide. Many valuable woods come from these African forests. Have you ever heard of mahogany or ebony? Both of these are trees found throughout southern Ghana along with the wawa, odum and kola trees. In northern Ghana, dotted throughout the savanna, you can find acacia, shea trees and the great baobab tree. Shea butter, which is commonly used in lotions, is made from the shea nut. The trees found in Ghana are used for food, shelter and medicinal purposes. Some, such as the silk cotton tree, are even used to make clothes! They provide shelter and food for many of the animals as well. As these valuable trees are cut down to be sold for timber, both the animals and the people surrounding those trees feel the loss.
10. These forest are also a source of food for Ghanaians. Can you imagine walking in your backyard and being able to pick a mango or banana? Here the people depend on the forest to do just that. You can find papaya, coconut, plantains, yams, pineapple and much more throughout Ghana's forests. Families harvest fruit and vegetables to feed themselves and to sell at roadside stands and markets.
11. The majority of meals in Ghana are stews or soups, usually made with onions, chili peppers and tomatoes. Fufu (seen here) is a very common dish in Ghana. It is made by pounding boiled cassava (a starchy root vegetable also known as yucca or manioc) and yams until they form a dough-like consistency. Then it is dipped into the soup and used like bread to soak up the soup. For dessert or a snack, kelewele is a common treat. Called hot plantain crisps in English, kelewele is sliced or cubed plantains that are seasoned with ginger, cayenne pepper and salt, then fried lightly in palm oil.
12. Cocoa trees are originally from the tropical rainforests of Central America and northern South America. However, the cocoa tree was brought to West Africa in the late 1800s. The tree flourished in West Africa's rich tropical rainforest and the Côte d'Ivoire and Ghana are now the top two cocoa producers in the world!
13. A majority of Ghana's rich forested land has been cleared; in fact, as much as 93 percent has been cut down! Sometimes the land is cleared for valuable trees that grow in the forest of Ghana, like mahogany and ebony. Mahogany is often used to make furniture, while ebony is used to make decorative figurines. Ebony is also traditionally used to make the black keys on a piano, as well as the black pieces in a chess set. Land is also cleared to plant oranges, bananas, and other cash crops. While many need the money gained from clearing land to support their family, there are alternatives to cutting down the forest. After all, the forest provides these communities with much more than just timber. What are some of the other things the forest provides?
14. Cacao trees are meant to grow in the shade of taller trees within a rainforest. This means that farmers are able to support their family and still preserve the forest around them! By growing cocoa under the shade of taller trees, Ghanaians will be able to save what's left of their rainforest. They will still be able to obtain food, fuel and medicine from the forest, while protecting the many plants and animals that live there.
15. The main cocoa harvesting season is from September to December. The farmers know when the pods are ready to be collected because they change from green to a dark yellow or orange color. Since most of the cocoa grown in Ghana comes from small farms less than three hectares big (approximately six American football fields), farmers depend on family, friends and neighbors to assist in the harvest. Yellow pods have to be carefully cut down from high branches using a knife attached to a long pole, while avoiding the nearby flowers and buds. Each cacao tree produces only 20–30 pods a year. Each pod contains 20–40 beans, and it takes 400 beans to make a pound of chocolate! That means each tree produces only 1–3 pounds of chocolate a year.
16. After the pods are collected, they are cracked in half and the seeds are removed. At first the seeds are wet and covered in a white pulp. They are spread out on plantain leaves on the ground and then covered up by more plantain leaves. This process—called fermentation—drains the white pulp away and helps

# Slideshow Script

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create the chocolate flavor within the bean! Next, as you see here, the seeds are placed on bamboo mats on tables and set in the sun to dry. If you look at the picture, you can see the woman is spreading the seeds around; this helps make sure everything dries evenly. After 7–10 days in hot sunny weather, the seeds should be dry. Just rub them together in your hand, and if they crackle they are dry!

also beneficial for the farmer. They are still able to gather fresh fruits from the rainforest, as well as use the trees nearby for food, fuel, shelter, medicine and even clothing!

17. These farmers are learning how to grow their chocolate trees under the shade of the rainforest. They are helping to protect the rainforests that remain in Ghana. Farming in a way that supports the forest is

18. These students have seen firsthand both the beauty and destruction of Ghana's rainforest. By learning how to protect the land they live on, they are helping to protect their sacred rainforest for themselves and future generations. There are things you can do from home and school to help protect rainforests all around the world and in Ghana. Can you think of some ways you can help defend Ghana's rainforests?