



Rainforest Activity Pack from the Rainforest Foundation

Who are the Rainforest Foundation, and what do they do?

The Rainforest Foundation helps protect the world's rainforests by helping the people who live in them to defend their environment.

As you will learn in this activity pack, there are a lot of different people and groups that are interested in using the world's rainforests. This includes people who want to chop the forest down for wood, to make space for their cattle, to grow crops, or to mine. The people that live in the forest may be less powerful than these groups, and so are at risk of losing their land. The Rainforest Foundation works with these groups and their governments to prevent this from happening, and so saving the rainforest from destruction.

Where are Rainforest Foundation projects?

The second biggest rainforest on earth, the **Congo Basin Rainforest**, in Africa, is under great threat. Can you identify this forest area on the map?



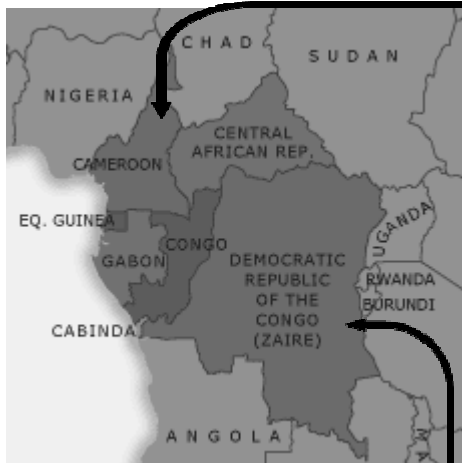
We will learn more about the people and plants and animals who live in the Congo Basin Rainforest, and why it is so important that they are protected.

There are many different groups of rainforest people living in over **70 different countries**. As many as 50 million indigenous people depend on the rainforest for their survival.

Rainforest Fact



Rainforest Foundation is working with the following countries in the Congo Basin region:



Cameroon

The rainforests of Cameroon are among the most diverse habitats in the world, but remain under great threat from commercial logging.

Loggers are rapidly destroying the rainforests, home to the Baka forest people. Rainforest Foundation projects here work with the Baka people to set up 'community forests', which allow the Baka people to protect parts of their forest from loggers and developers.

Democratic Republic of Congo (DRC)

The DRC is one of the biggest countries in Western Africa, with about 60 million inhabitants, and an estimated 100 million hectares of rainforest - about half of the continent's total.

Forest people such as the BaTwa and BaMbuti 'Pygmies' in DRC have suffered during the many civil wars that have been fought in the country. The fighting still continues in some parts and the forest people are also threatened by mining.

There are up to 50,000 Baka forest people in Cameroon's rainforest, and there are also similar 'pygmy' communities in Congo-Brazaville, Gabon And the Central African Republic.

Rainforest Fact



The Rainforest Foundation also works in Asia, in countries such as Indonesia, and in South America in countries such as Peru and Venezuela. See if you can now spot these forest areas on the map of the world on page one.

How this activity pack works

In the first part of this pack we meet Boukou, a Baka hunter-gatherer living in the Congo Basin Rainforest in the Cameroon. With him we learn about life in the rainforest.

In the second part we look at some the plants and animals native to the Congo Basin Rainforest, and in the third part why the rainforest is threatened.

Finally we take a look at some of the ways that rainforests can be protected, and how you can be part of this important fight.

If you would like more information about the information contained in this activity pack, or the work of the Rainforest Foundation, please go to the website at

www.rainforestfoundationuk.org

or you can send us an email: info@rainforestfoundationuk.org

Meet the Congo Basin's RAINFOREST PEOPLE.....



"Hello, my name is Boukou!

Me and my family are **Baka hunter-gatherers**. Our ancestors were the original inhabitants of this rainforest in Cameroon.

The word 'hunter-gatherer' means that we move from place to place collecting and hunting food found wild in the forest."

Baka people speak their own **unique language**, also known as Baka, which is different to the other languages spoken in the Cameroon.

Food in the Rainforest

Baka communities move from place to place in search of food that the forest provides, including animals, fruit and vegetables. The group remains in one area for a while and then moves to set up a new camp in a different portion of the forest.



The men hunt and trap in the surrounding forest, employing **bows and poisoned arrows** and **spears** to great effect.

Within the Baka culture, hunting is one of the most important activities, not only for its role in providing food, but also for the **symbolic meanings** and the prestige usually given to successful hunters. But whatever the success of a hunter, the meat is always shared by all in the community.

Hunting is done with great consideration. Rodents, antelope, porcupines, monkeys and crocodile are often hunted.

"We use our traditional knowledge of animal breeding periods to know when we can hunt animals. This way we never hunt too many of a species and that way it survives to provide more meat in the future."

Says Boukou.

This means that the Baka use their resources in a **sustainable** way, maintaining the delicate balance of the rainforest ecosystem.

Thinking Point

It is important for all of us to use our resources in a sustainable way, for example by recycling. Can you think of other ways we can live a sustainable lifestyle at home and at school?



The women gather **wild fruits, nuts, mushrooms** and **vegetables**, such as yam, in the forest. They also practise beekeeping or collect **honey** from beehives in the trees. During some periods of the year insects such as **termites** and **caterpillars** are eaten too!

During dry seasons when the water level is low, **fish** and **eels** can often be found in the mud of the river bed. Fresh-water **shrimps** and **crabs** are also harvested and cooked back at the camp for the community to share.

Rainforest Homes

Boukou lives with his mother, father, two brothers, a little sister and his two grandparents. Small groups of families live together like this in a community.

The women in the family build a **temporary hut** constructed of bowed branches covered in large leaves, called **Mongulus**. Sometimes they add other plant material to the dome of leaves in order to make the roof waterproof. Every time they move camp, they build a new one!



The huts are usually small inside and equipped with basic items such as a bed and shelves, which are all made from wood that they collect in the forest.

Daily Life

While the men are out hunting, women provide **education** to their children, through the learning of various forest activities. Some Baka children attend local schools but this is not very common as the camps are always moving as part of their nomadic lifestyle, and schools, which everyone has to pay for in Cameroon, are too expensive for most Baka people to afford.

The Baka people practice **traditional medicine** using the healing power of the rainforest plants and skills handed down orally from generation to generation.

Another typical activity is weaving **mats** and **baskets** out of leaves and other forest material. There are lots of different weaves depending on the different models and uses for baskets. Baka people are also skilled in making hunting weapons, musical instruments, cooking equipment and clothes from the materials that they harvest from the forest.

Baka rituals and religion

Baka people worship a **forest spirit** known as **Jengi**, considered the great spirit and guardian of the forest.



Men, women and children all like to **sing songs** accompanied by **drumming**, dance **traditional dances** and perform **drama**.

Many of these portray their worship of the forest and each successful hunt is followed by a dance of thanksgiving.

There are **rituals** to mark marriages and deaths of community members, and **initiations** into adulthood for both women and men. There are also special dances to cure sickness and disease performed by the **healers** in the community.

Threats to the Baka Forest People

The Baka people are being forced from their forests for a number of reasons. One of the biggest threats is **industrial logging** that wipes out their traditional forest homes, spiritual sites and hunting grounds. The wood that is logged is then often exported to Europe and the rest of the world.

The loggers open roads into the forest which encourages **commercial hunting** of the rainforest animals, so the Baka people cannot hunt traditionally to provide meat for their families.

The establishment of **National Parks**, designed to protect areas of wildlife, has also resulted in Baka forest people being evicted from their land and denied access to the forest that has been their home for generations.

Thinking Point

Try and imagine that you are a member of a Baka community that has had to move from the forest to the outskirts of a town. Thinking about what you have just read, make a list things in your daily life that would change if you had no access to the forest.



As the forests have disappeared or become inaccessible, Baka people have been pushed into populated areas. Some communities have built **permanent camps**, often near roadways that have been built by logging companies. Their neighbours, the Bantu people, hire their labour for a very **low wages** to work in logging and harvesting, or to work as servants.

Often the Baka people are 'paid in kind' with cassava, salt, local alcohol or clothes. This happens because Baka people have never used money, and place little importance on gathering individual wealth. Sometimes the Bantu people lend them guns to hunt animals and take an unfair share of the animals caught in return. Very often Baka people are **discriminated against** and are not given positions of responsibility within the village, and may even be beaten and mistreated.

Without rights to their land they lose their homes and spiritual sites. Without fishing rights to catch fish, or access to the forest to hunt and collect meat, tubers and vegetables, the Baka people very often suffer from **nutritional deficiency**.

As Boukou says **"Where we will live if we do not have the forest? We rely on the forest for everything: for the materials for our homes, our food and our medicine. If the forests disappear, or we are denied access to them, our culture will disappear too and we will live in poverty."**



Check it out!

Go to www.rainforestuk.org/s-Kids and compare Boukou's life with that of Mirim, who lives in Amazon - the biggest rainforest on earth!

Let's meet the Congo Basin's RAINFOREST ANIMALS and PLANTS

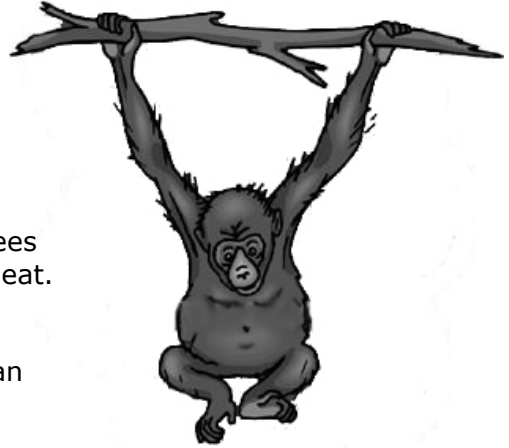
The Congo Basin Rainforest is teeming with wildlife!

Animals



There are lots of **mammals** that live in the rainforest, including big **elephants** and **wild forest buffalo**.

Chimpanzees spend much of their lives high up in the trees where there are always flowers, leaves, fruits and nuts to eat. They are very acrobatic and love to play in the branches, and even sleep on trees in nests they build. Chimpanzees have very strong arms – even though they are smaller than humans they have a pull 5-6 times stronger!



Chimpanzees, followed by gorillas, are the next closest living relative to humans. Their **DNA is 97 – 98% identical** to that of humans. Like humans, they have individual finger prints too!

Rainforest Fact



Gorillas, the largest primate species, move around by "knuckle-walking". Adult males, when standing, range from 165 – 175cm in height (5ft 5inc to 5ft 9inc) – are you taller or shorter than the average gorilla? Gorillas are mainly vegetarian, eating fruits, leaves, and shoots, and sometimes insects.

Each group of gorillas has a mature male 'troop leader'. Each troop typically has 5 to 30 gorillas. The leader usually makes all the decisions, guiding the troop to feeding sites and taking responsibility for the safety and well-being of the group.

The Mandrill is the world's largest **monkey** species, and is found in the Congo Basin rainforest. Mandrills live in big groups of up to 800 animals. Mandrill infants are born with their eyes open and with fur, and maintain relationships with their mothers their whole life!



Many of the animals in the Congo Basin Rainforest are not found anywhere else on earth! Many, such as gorillas, mandrills and chimpanzees are also **endangered**. If their habitats, the forests, are not protected then they will be pushed to **extinction**. Once a species becomes extinct, it is lost forever.

There are over 5,600 species of plant and animals on the **2006 IUCN 'Red List'** of threatened species. If nothing is done to protect these species, many will be extinct within our lifetime.

Rainforest Fact





Check it out!

Go to the website www.iucnredlist.org and click on 'Photo Gallery' to see pictures of some of the world's other endangered species.

Birds



Over 300 bird species are found in the Congo Basin Rainforest, such as the **Congo African Grey parrot**.

Some of these bird species are very rare and over one third are **endemic**, meaning they can only be found in the Congo Basin rainforest.

Mousebirds are species of small bird that lives in the forest. They are **frugivores** which means that they survive on fruits, berries, seeds and nectar, which they scurry through the leaves in search of like a mouse – hence the name! Mousebirds are social birds, feeding together, taking dust baths and roosting together in groups of 20 or so birds. They are noisy creatures, making a warbling *tsu-tsu* call while in flight. They have an alarm call described as *tisk-tisk*. Can you make these noises?

Other bird species that can be found deep in the forest include the White-crested Tiger Heron, the Congo Serpent Eagle, and the Black Dwarf Hornbill.

Because of their beauty, birds are often trapped by **commercial hunters**, for their **feathers** or to be sold as **exotic pets**. This is illegal, and away from their rainforest homes, these birds very often die.

Amphibians and Reptiles

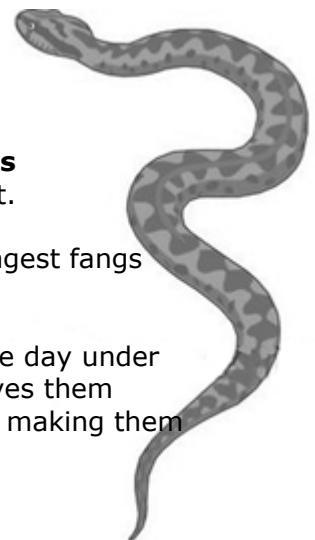
There are hundreds of **Reptiles** in the Congo Basin Rainforest. These include **snakes, lizards** and **crocodiles**.

Venomous viper snakes, such as the **Gaboon Viper** and the **Rhinoceros Viper**, named after the horn that it has on its head, live in the rainforest.

The Gaboon Viper is one of the world's heaviest vipers and it has the longest fangs and the most poisonous venom of any snake!

These two species of snake are mainly nocturnal, and they hide during the day under leaves or branches, or in holes. They have triangular markings which gives them excellent **camouflage** in the dappled light conditions of the forest floor, making them almost invisible.

When approached, the vipers often reveal their presence by hissing. The Rhinoceros Viper is said to produce the loudest hiss of any African snake!



The **Dwarf Crocodile** is one of the three existing African species of crocodile. It is also the smallest crocodile species in the world, attaining an adult length of 1.5 meters (5 feet). It is a solitary, nocturnal creature, digging out a burrow to hide in and rest during the day.

Amphibians such as **frogs** and **toads** live in the Congo Basin Rainforest. The **Lake Oku Clawed Frog** is a very small, green frog found only in the rainforests of the Cameroon, and is **critically endangered** due to the shrinking forest. The male frogs reach a maximum length of just 2 to 2.5 cm!

The biggest frog in the world, the **Goliath frog**, is also found in Cameroon's forests. They grow to be over 30 cms long and weigh as much as a large housecat – about 3 kgs! They are famous for their leap of up to 3 metres.

Rainforest Fact



Insects

The rainforest is also teeming with creepy-crawlies! There are thousands of species of **insects** to be found, including **dragon flies, moths, stick insects, termites, ants, grasshoppers, dung beetles** and **spiders**.

There are over 250 recorded **butterfly** species in the Congo Basin Rainforest.

Some interesting insects include **Stalk-eyed Flies** which have their eyes at the end of stalks like antennae! Males with longer eye stalks are typically more attractive to female flies and therefore have a reproductive advantage.

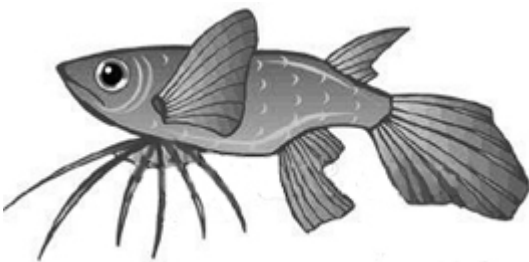
There are more species of insect in the world than any other group, representing about **80 percent of the world's species**, with nearly a million different species recorded!

Rainforest Fact



Fish

There are lots of fish species to be found in the rainforest's streams, rivers and lakes.



The **African Butterflyfish** catches its prey on the surface of water, and so its eyes are always looking up and its mouth is specifically adapted for the job.

If enough speed is built up in the water, a butterflyfish can jump and glide a small distance above the surface to avoid being eaten by a **predator** fish!

Thinking Point

What is the difference between a mammal and a fish, or a bird and a reptile? If you don't know, try and look it up. (Hint! Are they warm or cold-blooded? Do they lay eggs?)



Plants

The rainforest is full of incredible **plants, trees, flowers, herbs, ferns** and **mosses**. As 80% of the Congo Basin Rainforest's flowering plants are **endemic**, they are also under great threat when the rainforest is cleared. If their habitat disappears, the plant species will disappear forever too.

It is not just important that rare trees are not cut down, but that entire **ecosystems** are protected. This is because many tropical trees depend on specialist **pollinators**, such as bats and birds, which cannot survive without large areas of forest.

Only a very tiny percentage of the rainforest's plants species have been identified. It would take 250,000 scientists all of their working lives to study the known plants and animals of the world's tropical rainforests!

Rainforest Fact



Plants differ from animals and insects in that they feed through a process known as **photosynthesis**, using the energy in sunlight to convert **carbon dioxide** from the atmosphere into simple sugars. These sugars are then used as building blocks to make the structure of the plant. Plants rely on soil for **water** and **minerals** such as phosphorous and nitrogen. They also require **oxygen** in the atmosphere and around their roots.

This capacity to absorb carbon dioxide make forests very important in the fight against **climate change**. Carbon dioxide is one of the main **greenhouse gases** that get trapped in the atmosphere and warm the earth. Protecting forests can therefore help reduce the amount of carbon dioxide in the atmosphere, and slow the process of climate change.

A once common but now vulnerable tree species in the Congo Basin rainforest is the **Moabi tree**. It is a one of the largest trees in the rainforest and can grow to be 60 m tall, and have a trunk diameter of 5 m! The Moabi has a lot of cultural importance to the Baka forest people, who use the bark as part of their rainforest medicine. It is very sensitive to commercial logging because it does not flower or produce fruit until it is over 50 years old, so **regeneration** of the species is a very long process.

Other important trees include the **Makoré tree**, which is a source of fruits and seeds eaten by elephants and other forest mammals. Due to the good quality of the hardwood it produces, demand to make furniture, musical instruments, flooring and boats has led to unsustainable logging and the tree is listed as endangered.

Some rainforest plants include **Ancistrocladus grandiflorus**, meaning 'big flower', because it has the largest flower size of its type. The flower can only be found in a small part of the forest, that is currently reserved for plantation expansion. Because of small numbers of the plant in existence, and the threat to it's habitat, it has a status of **critically endangered**. Plants in the same family are under scientific investigation due to the discovery of a chemical in the plant that has a high level of activity against HIV.



THREATS to the Congo Basin Rainforest

Industrial Logging

Trees are cut down by **logging companies**, often from Europe, to provide **wood** which is sold mostly abroad.

Wood is used for many things, including buildings, furniture, paper, cardboard, musical instruments and sports equipment. Wood is a **renewable resource**, which means that its supply is not fixed and can be replenished naturally with the passage of time.

Thinking Point

Can you think of any other natural resources which are **renewable**? What about any resources that are **non-renewable**, which once used cannot be reproduced?



The problem in many parts of the rainforest is the logging is **unsustainable**. Some species of tree are chopped down in such numbers that none are left to produce seeds. As many of the plants and trees in the Congo Basin Rainforest do not exist anywhere else on earth, when this happens in large areas of forest the species can become threatened with extinction.

Many trees in the tropical rainforest take a long time to grow. A large tree that is cut down is often over 100 years old.

In extreme cases, even the soils are destroyed, meaning that the forest can't replace itself at all and the land becomes **barren**.

We also saw how animals lose their homes rainforest is cut down. This **habitat loss** has led to species such as gorillas becoming endangered species, despite having large populations before when the forest was untouched.

The Bushmeat Trade

Another problem facing the animals of the rainforest is **illegal commercial hunting**. Animals such as gorillas, chimpanzees, porcupines, monkeys and crocodiles are killed for their meat, which is called **bushmeat**, and often sold for high prices. Rhinoceroses and elephants are also hunted for their **horns** and **tusks** which fetch high prices when sold illegally.

Roads established and maintained by logging concessions intensify bushmeat hunting by providing hunters greater access to forest wildlife and by lowering hunters' costs to transport bushmeat to markets in the towns. **Orphan** gorillas, chimpanzees and monkeys whose parents have been killed for the bushmeat trade are also often sold as **pets**.

Unlike the Baka people who know how to hunt in a sustainable way, illegal hunters kill large numbers of each species. These species cannot breed quickly enough to replace the number of animals hunted and so get pushed to the edge of extinction.

There are some **national parks** and protected areas, but often illegal hunting and logging goes on anyway and perpetrators are rarely brought to justice.

On 7th June 2006, the **Western Black Rhinoceros** species was declared extinct. In the year 2000, the last ten animals were counted in Cameroon, but due to illegal hunting for their horns, none survived.

Rainforest Fact



The Exotic Pet Trade

Animals, reptiles and insects such as butterflies are caught in the wild and exported to be sold as **exotic pets**. This often illegal activity is thought to be the second biggest cause of **species loss** after habitat destruction. Because in captivity the conditions are very different from the complex ecosystem of the rainforest, many die in transport or within a very short time.

Agriculture

Large areas of rainforest are burnt and cleared every year in order to make space for **cattle** or **crops**. Forest soil, when protected by the trees, is very rich in nutrients. These are washed away very quickly though, so soil quickly becomes unfertile, and crops grow badly. Each farmer is caught in a cycle of cutting down more forest every few years in order to continue cultivating his crops.

Mining

Mining is another important source of money for governments in Central Africa. **Metals** such as **aluminium, cobalt,** used in things like batteries used widely in construction and to make wires, and **gold,** are mined, along with gems such as **diamonds**. As the political stability of countries in the region increase, investment in mining is likely to increase, along with its often negative effect on the Congo Basin Rainforest's **ecology** – its delicate balance of natural processes.

Very often the mining process **pollutes** lakes and streams with **chemicals** which poison fish, birds, animals and the people that use these water supplies. The workers in mines and logging operations also often live off animals in the forest, increasing **poaching**.

Conflict and War

There have been decades of civil war in the Democratic Republic of Congo, which has regularly involved other West African nations. Much of the fighting took place in the rainforest, where the animals were regularly a source of food for the soldiers, and forest people were subjected to violence. A ceasefire and elections in 2006 give hope to an end to the fighting but unfortunately, violence from criminal gangs and militia continues in parts of the DRC. Many forest communities are still hiding as refugees and in the animal populations are still being poached. Poaching has seen the 30,000 hippos the Virunga National Park had in the 1970's diminish to 600 now.

WAYS TO PROTECT the Congo Basin Rainforest People, Animals and Plants

There is no easy solution to the problems facing the Congo Basin Rainforest. It is in a very poor part of the world, and countries with forests need money in order to be able to develop economically, and provide a better quality of life for their inhabitants.

There are ways of ensuring that people who live in forests can improve their quality of life and save the forest, but very often decisions are made by governments to create money in the short-term, without taking into account the more long-term and often very negative consequences.

Often countries in Central Africa are also unable to stop illegal logging or poaching, because they lack the means to successfully patrol the large forests. The Democratic Republic of Congo has just gone through a war and lacks even the most basic infrastructures. The importance of the Congo Basin Rainforest is global, it is also in our own interest that it should be well managed.

Land Rights in order to protect the Rainforest

Land laws are changing in the Congo Basin area and sometimes **land rights** are given to traditional users of the forest by the government. It is very difficult though for the Baka forest people to prove their rights, as they have always moved from place to place as part of their traditional way of life.

The Rainforest Foundation is one of the organisations helping the Baka people to prove to their governments that they have legal rights over their traditional lands. The setting up of '**community forests**', which are protected from loggers, hunters and developers, is one way that allows the Baka people to live in the forest and protect it.

Protected Forest Areas

In addition to ensuring that forest people have rights to their land, it is important that forested land is protected from illegal logging and hunting. This may involve setting up **national parks** and **protected zones**, especially where there is a high amount of biodiversity, and where there are endangered species.

It is very important that traditional users of the forest are not excluded from using the protected areas, for example by creating **community hunting grounds**.

Sustainable Forestry

It would be unrealistic to stop logging activity altogether, because it provides an important source of jobs for local people, and revenue for the government. In order for forestry not to be destructive, the loggers must follow **rules** as to which trees to cut down, so that not all of the forest is cleared in one go, and rare and endangered species are not cut down. If done properly, this allows the forest to **regenerate**.

There are **wood certification schemes** that allow a person buying wood to know that it has not come from an illegal source. Unfortunately only a small amount of the wood that is bought in Europe today has this certification. By buying wood that is certified, we are encouraging more logging companies to join these schemes and stop deforesting illegally.

It is also important that we buy paper that comes from sustainable forests, and if possible with **recycled paper** content.

Stopping the Trade in Illegal Wood and Bushmeat

Bushmeat from endangered species such as monkeys, chimpanzees and gorillas is illegal, and yet it still goes on. In order to make it harder for commercial hunters, **legal systems** must be strengthened in order to make it more likely that they will get caught. It is also important that illegal hunters have sufficient incentives not to continue, facing large fines and even imprisonment.

Political Support for Rainforests and Rainforest People

At the moment European and United States governments support logging in the Congo Basin Rainforest, because it **creates jobs** for people and brings **money** into the country.

Because of high levels of **corruption**, much of this money though goes to the logging companies themselves, and often poor people do not see any of the benefits of the logging. As we saw with the Baka forest people, they often lose their homes and livelihoods and gain little in return.

The **World Bank**, which lends money to poor countries and advises them on development, is encouraging countries like the Cameroon to make big areas of land available to logging companies. The Rainforest Foundation is one of many organisations that **disagrees** that this will bring benefits to the country and is fighting to protect the rainforest people and their homes which would be threatened by this of logging activity.

WHAT YOU CAN DO!

1) Choose wood carefully

Make sure that your home and school do not buy illegal wood that comes from rainforests. Ask the salesperson where the wood came from and whether it is certified as being from a sustainable source. You can also check in the 'Good Wood Guide' published by Friends of the Earth.

2) Spread the word!

You can show the rest of your school what you have learned about the rainforests by making a display! Go to the Rainforest Foundation Kids website www.rainforestfoundationuk.org/s-Kids where you can download activity sheets, or you can draw pictures and write your own stories about the people and animals who live in the rainforest.

3) Protect an Acre

By raising money you can help protect an acre of rainforest. For a £20 donation you will receive a certificate to display in your classroom and an information pack on the area of land that you have helped to protect. More information is available on the Rainforest Foundation website.

Here are some activities that other school children have done to raise money. Ask your teacher to help you organise an event, and send the money you raise to the Rainforest Foundation.

*** Hold a Sponsored event ***

You can do a sponsored run, walk, swim, bike ride, jog, hop, three-legged race, book read, skip, ramble, football match, dance, silence - in fact, you can do a sponsored anything as long as it is safe and you have permission! It can be more fun and easier if you do your event in a group. Once you have thought of a good idea, the next thing to do is to ask your teacher to help you organise it.

*** Hold an Own Clothes Day ***

Ask your teacher to help you organise a day when everyone is allowed to wear their own clothes to school and to bring a donation. Why not have a rainforest theme where everyone wears green?

*** Hold a Rainforest Event ***

Organise a play, dance routine, talent or fashion show or an art exhibition of your class paintings and ask people to make a donation to come and see your art and performances!

*** Do an odd job for the Rainforest Foundation ***

Ask your parents if you can do a chore such as a carwash, litter collection, or odd jobs in the garden. The money that you earn will help protect rainforest people and their homes all over the world.