

# Why are rainforests so important?

**M**OST OF US use **rainforest** products every day. More importantly, however, rainforests help control the world's **climate** and our oxygen supply. So the next time you eat chocolate, treat your asthma, play a guitar or even breathe, you may have to thank the rainforests.

## The rainforest as medicine chest

Your local pharmacy is proof of the healing power of rainforest plants. More than 7000 modern medicines are made from rainforest plants. They can be used to treat problems from nagging headaches to killer diseases like malaria. They are used by people who suffer from multiple sclerosis, Parkinson's disease, leukaemia, asthma, acne, arthritis, diabetes, dysentery and heart disease amongst many others. The world's first birth control pills were derived from yams in Central America, and more than 3000 plants are used to control human fertility.

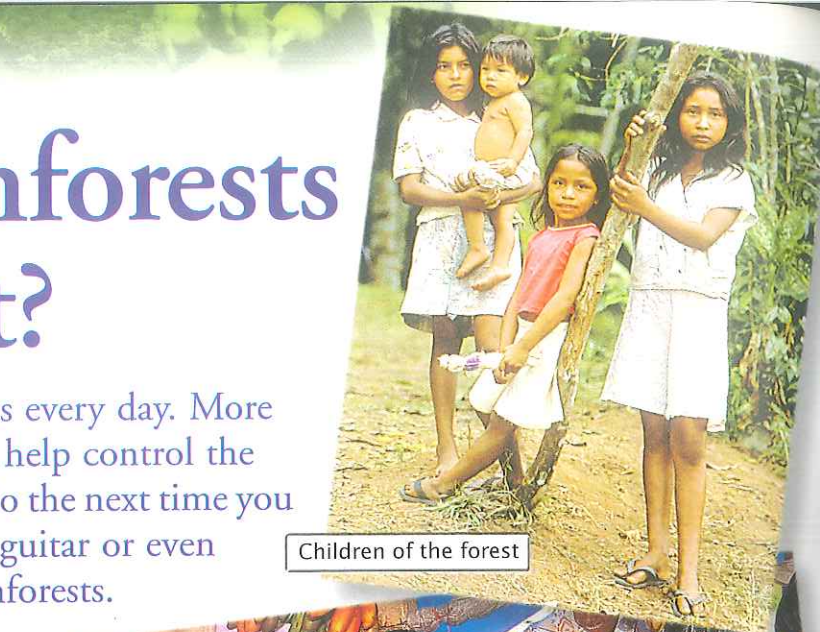
Even rainforest animals can be used to cure human diseases. Tree frogs from Australia give off a chemical that can heal sores, and a similar chemical from a South American rainforest frog can be used as a powerful painkiller. The poisonous venom from an Amazonian snake is used to treat high blood-pressure.

Perhaps the greatest benefits to medicine and our own health, however, are yet to come. Only one per cent of the known plants and animals of the rainforest have been properly analysed for their potential. The scientists who analyse these plants are known as chemical prospectors.

## The rainforest as home

Rainforests are home to the greatest profusion of life on the planet: at least half of all known plants and animals live in these forests, which cover only seven per cent of the Earth's land surface.

Plants and animals also share their **habitat** with humans: at least 50 million **indigenous** people live in rainforests worldwide. From the Kuna people of Panama and the Yanomami of Brazil to the Baka people of Cameroon and the Penan of Borneo, these people have traditionally lived a way of life that has little impact on their forest home.



Children of the forest



An open air market in South-East Asia

## The rainforest as supermarket

The people who live in or near the rainforests gain much of their food from the forest. But rainforests also supply the supermarkets of the world with their bounty. Most of these fruits and nuts are now grown by farmers rather than harvested directly from the forest, but it was in the rainforests that they originated.

Chocolate first came from cacao trees native to the Amazon rainforest. Today the cocoa in the chocolate you eat has most likely come from huge cacao **plantations** in West Africa. Similarly, brazil and cashew nuts, cinnamon, ginger, pepper, vanilla, bananas, pineapples, coconuts, paw-paws, mangoes and avocados were all originally rainforest plants. Even the gum used in chewing gum comes from a rainforest plant, as does the tree that produces rubber.

## The rainforest as timber supplier

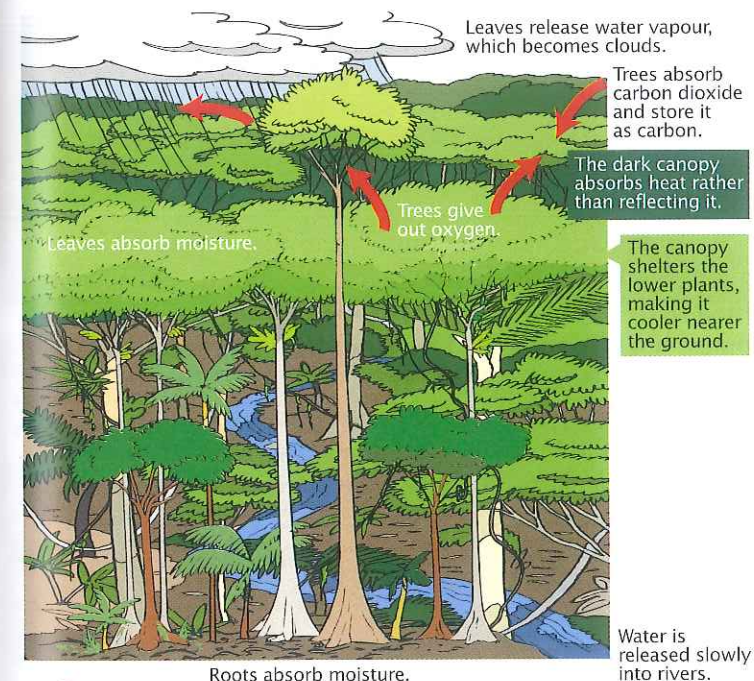
The most obvious use for rainforest products is from the timber in the trees. Rainforest trees are generally **hardwood trees**, making them resistant to decay and attractive for building. Well-known rainforest timbers are mahogany, teak, ebony, balsa and rosewood.

Rosewood is particularly interesting, as it is considered the best timber in the world for guitar making. In many **tropical** countries people also collect timber as fuel for cooking or heating.

## The rainforest as climate controller

Rainforests help keep our climate relatively stable in a few different ways. The rain that falls in a rainforest is quickly drawn up through the plants and then returned to the air as **water vapour**. This vapour gathers together to create clouds, which in turn provide more rain. Without these plants the water would not return to the **atmosphere** as quickly, and the area would become drier. This process also cools the surrounding air by up to five degrees.

Rainforests also cool the planet, because they absorb much of the sun's heat rather than reflecting it back into the atmosphere.



● Rainforests play a vital role in controlling the world's climate.

## The rainforest as oxygen supplier

All animals, including humans, breathe in oxygen and breathe out carbon dioxide. Carbon dioxide is poisonous to animals but not to plants, which use it to grow. They then give off the oxygen that we use. This relationship, known as the **carbon-oxygen cycle**, is under great strain because humans burn trees and **fossil fuels**, thereby producing more carbon dioxide. Rainforests are sometimes called 'the lungs of the Earth', and scientists believe that half of all the world's oxygen is produced by the Amazon rainforest alone.

# Activities

## REMEMBER

- 1 What is a chemical prospector?
- 2 Name four indigenous groups from around the world who live in rainforests.
- 3 Why are rainforests sometimes called the 'lungs of the Earth'?

## UNDERSTAND

- 4 Carefully examine the photograph of an open-air market, and list the foods that you recognise.
- 5 Explain how rainforests can partially create their own climate.
- 6 Imagine that over the next 20 years, about three-quarters of all the rainforests in the world have been destroyed. Describe how the world would change because of this **deforestation**.

## COMMUNICATE

- 7 In a group of three, draw a picture of a rainforest tree in the centre of a large piece of poster paper. Around the outside of this picture, use words and diagrams to show the ways in which rainforests are useful. You could use magazine advertisements and other pictures to illustrate your poster.
- 8 Which of the uses of the rainforest would you consider to be the most important reason for looking after the forests? Explain your answer. Find other students in your class with the same answer and share your ideas.

## CREATE

- 9 Plan a vegetarian meal which uses only ingredients that once came from rainforests. Be as creative as you can in combining ingredients and deciding on cooking and presentation methods.

## INVESTIGATE

- 10 Make a list of things in your home that may come from a rainforest. Remember to look in the medicine cupboard and the pantry as well as looking at the furniture. Perhaps you could bring some examples to school and your class could set up a display.

## CONNECT

- 11 These pages list only a few of the products we use from rainforests. Conduct some research, using the Internet or library resources, into other uses of the forests. Write a short report (about 400 words) on your findings.

- I can:*
- recognise the importance of rainforests
  - work with other students to produce a poster about rainforests
  - predict the effects that further deforestation might have on the world
  - research the ways in which we use products from rainforests.