

Edible Forest Tour

This tour is ideal for younger pupils. The children will be shown a wide variety of foods which originate in the world's rainforests. They will learn about where and how these foods are grown and how it reaches their tables. As well as the main emphasis on plants and animals that form part of our diets and the diets of the people living in the forests, children will also experience what it is like to visit a rainforest. They will learn a little about the climate which allows the forests to grow and the countries in which they are found. This tour is very suitable for children studying about food within the science curriculum, or for those who are studying a rainforest environment within the geography curriculum.

Curriculum links

Key stage 1

Science – Life processes and living things (Sc2)

2b) – that humans and other animals need food and water to stay alive

2c) – that taking exercise and eating the right types and amounts of food help humans to survive

Geography

3e) – recognise how places are linked to other places in the world (e.g. food from other countries)

6b) – a locality either in the UK or overseas that has physical and/or human features that contrast with those in the locality of their school

Key stage 2

Science – Life processes and living things (SC2)

5b) – about the different plants and animals found in different habitats

5c) – how animals and plants in two different habitats are suited to their environment

5d) – to use food chains to show feeding relationships in a habitat

5e) – about how nearly all food chains start with a green plant

Geography

3g) – to recognise how places fit within a wider geographical context and are interdependent (e.g. through the supply of goods)

6a) – a locality in a country that is less economically developed

Tour notes

Rainforest products form an important part of our everyday lives. The “Edible forest” tour will include most of the following items, although teachers should be aware that these might vary slightly according to the season and the continually evolving nature of our rainforest garden.

1. **Giant taro** (*Alocasia macrorrhizos*)

This plant is from Indomalaya. While it is almost unknown in the West, it is an important food source for people in the tropics. It is cultivated for its edible underground stems (rhizomes) that are eaten in a similar way to potatoes.

2. **Cocoa tree** (*Theobroma cacao*)

This tree originates from the forests of South America, where the cocoa beans were extensively used by the ancient Inca civilisation. Cocoa beans form in large pods that grow directly from the trunk. The trees are now grown in plantations in many other tropical countries, notably Ghana. However, the cocoa is usually processed in the USA and Europe where it generates a multi-million pound industry. The imbalance between the profits made by the producing countries and the processing ones is currently an issue that is being tackled by Oxfam. The production of “fair trade” chocolate is one possible solution.

3. **Vanilla** (*Vanilla fragrans*)

Vanilla is a climbing plant and a member of the orchid family. It is native to Central and South America. The vanilla spice comes from the seed pods of *Vanilla planifolia*, a close relative of *Vanilla fragrans*, which we have at The Living Rainforest. The pods develop from a yellowy green flower. In the wild, the flowers are only pollinated by native bees, so where they are grown commercially in other countries, e.g. Madagascar, they have to be pollinated by hand. This labour-intensive process makes vanilla the second most expensive spice after saffron, and has meant the widespread use of artificial ‘vanillin’ as flavouring for ice-creams etc.

4. **Avocado** (*Persea americana*)

This low-growing tree, native to the Americas, is now grown world-wide in tropical climates. The pear-shaped fruit, with its light green soft flesh, is an important crop in many tropical countries where it is eaten as a staple vegetable. It has also become an important export crop.

5. **Red billed toucan** (*Ramphastos tucanus*)

Toucans, with their unusual beaks, are noisy and full of character. However, they are seen as a potential source of food by forest dwellers.

6. **Mexican breadfruit** (*Monstera deliciosa*)

Mexican breadfruit is the fruit produced by the Swiss cheese plant, *Monstera deliciosa*, a rapid climber and prolific fruiter. It has a lusciously exotic flesh, with a creamy consistency and tastes like a mixture of banana and pineapple.

7. Banana (*Musa acuminata* 'Dwarf Cavendish')

Originally from Indonesia, bananas are now a very important staple food in many tropical countries as well as being a vital export crop. The banana is a gigantic herb which produces a large flower spike with numerous yellow flowers which develop downwards from the top. They form bunches of 50-100 fruits. In many Central American countries, bananas are grown in large plantations on land previously covered by rainforests. This is a direct cause of massive losses of virgin forest in these areas. The economies of some countries are totally dependent on the banana harvest, although the people who work in the plantations often receive very low wages. This is another vital tropical crop which is being included in the 'fair trade' campaign.

8. Coffee (*Coffea arabica*)

The coffee tree originates in east Africa. It is an evergreen shrub or tree that produces small berries, known as 'cherries', which turn red when ripe. These fruits contain two seeds (beans) that are dried and then roasted to produce a stimulating drink. Coffee is now a very popular drink, and is the second most traded commodity in the world (oil being the first). The trees are often grown in large plantations, but the best coffee comes from smallholdings growing coffee under the shade of the forest canopy. This coffee is sometimes known as 'shade-grown' or 'bird-friendly', as the taller forest trees remain, retaining the birds' habitat.

9. Goeldi's monkey (*Callimico goeldii*)

These South American monkeys live in family groups and spend most of their time up in the canopy trees. While it may be an unsavoury idea to us, these creatures provide a useful source of protein for people living in the forests of the Amazon basin. Unfortunately, this species is threatened with extinction due to the continual and often rapid destruction of its habitat; large areas of the rainforest are cut down every year so the land can be used for ranching, mining etc.

10. Dwarf Crocodile (*Osteolaemus tetraspis*)

Dwarf crocodiles come from West Africa where they live in areas of slow-moving fresh water. As the monkeys, these animals are hunted for their meat (rather than the proverbial handbags!). Sadly this species is threatened in the wild, but this is mainly due to loss of habitat rather than to hunting.

11. Pineapple (*Ananas comosus*)

The pineapple plant belongs to the bromeliad family. Their leaves overlap at the base of the plant to form a tight vase into which water collects. They are another example of a fruit originally found in tropical America and now grown commercially in the tropics throughout the world.

12. Ginger (*Zingiber officinale*)

The ginger plant is originally from Indonesia, but it is now grown in many tropical countries. The distinctive spice which we use for flavouring both sweet and savoury dishes comes from the rhizomes (underground stems) of the plant.

13. Giant land snail (*Achatina fulica*)

Snails are seen as a great delicacy in France, although not often eaten in England. These giant snails would make a good meal.

14. Poison arrow frog (Dendrobatidae family)

The most poisonous of these frogs, the Golden poison frog (*Phyllobates terribilis*) contains enough poison to kill one hundred men. Indian tribes of the Amazon Basin rub their arrows on the skin of poison dart frogs to make them more effective when hunting. The poison frogs on display are not actually poisonous as they are not fed their favoured diet of toxic insects.

After the tour

The tour takes about 45 minutes. Afterwards, you will be able to take the children around the greenhouses in small groups. This is a good opportunity to complete worksheets or to spend time looking in more depth at some of the plants and animals. There are many good opportunities for both artwork and creative writing.



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