

Save a Tree. Save Me!

RAFFLESIA

The Rafflesia flower is a prime example of how fragile some organisms and species are within the rainforest environment. It is one of the world's rarest and most endangered plants. The flower grows up to one metre wide and weighs around ten kilograms, making it the world's largest individual flower.

Its survival is completely dependent upon one particular vine—the Tetrastigma. This vine only grows in undisturbed rainforests. The Rafflesia is in fact a parasitic plant with no leaves, stems or roots that attaches itself to the host vine to obtain water, nutrients and physical support. Once the bud has attached to the vine, it swells to a cabbage-like head over 12 months. The bud then bursts open on a rainy night to reveal the large, five-petalled, bright red speckled flower.

The Rafflesia is well known for its characteristic rotten-meat smell, and it's sometimes referred to as the 'corpse flower'. The putrid smell attracts carrion flies and beetles to the flower to pollinate it. The full-grown flower lasts for only 5 to 7 days before it dies. It is thought that tree shrews and other forest mammals eat the fruits and disperse the seeds.

It is unknown how many Rafflesia still survive. However, as the rainforests of Borneo and Sumatra continue to be destroyed it can be assumed that numbers are declining.

Rainforests

An ecosystem characterised by a dense growth of trees in a very wet climate is called a rainforest. There are two types of rainforests: tropical and temperate. The largest areas of rainforest are in the tropics, and they are amazingly rich in life: they are home to more species of plants and animals than the rest of the world's ecosystems combined. The dominant plants in tropical rainforests are broadleaf evergreen trees. They grow to heights of up to 27 metres, forming a canopy that shades the lower layers of the forest. Vines rooted in the soil grow up tree trunks and along branches until their leaves also are part of the canopy. Reaching above the canopy are lofty trees that attain heights of up to 60 metres. Below the canopy is the understorey, which includes young trees, ferns and herbaceous plants. The dark floor of the forest is generally covered with leaves, seeds, fruits, and other matter that falls from the upper layers.

Discuss

Introduce the topic of rainforests and the threats to their survival by asking your class the following questions, which are designed to highlight the complex nature of ecosystems and the conflicting demands made on rainforests:

- Who lives in a rainforest? (animals, plants, insects, humans)
- Who do rainforests belong to? (government, people who live there, animals... everyone?)

- What use are rainforests to us? (they provide materials and foods and medicines; 50% of the world's plants and animals live in rainforest environments; they regulate carbon dioxide and oxygen in the atmosphere)
- Why does it matter if plants such as Rafflesia become extinct? (it disrupts the food chain and therefore the ecosystem)

Research

Listed below are some topics that relate to rainforests. Invite students to create a research report based on one of the topics or one of their own.

- Describe the purpose of the layered ecosystem of a rainforest.
- What is the food web contained within a rainforest?
- What role do primates play in a rainforest?
- What's happening to the world's rainforests, and why should we care?

Relevant articles to aid students in their research can be downloaded from the Teacher Toolkit (www.scholastic.com.au/toolkit). Encourage students to create a glossary as they conduct their research.

Inquiry Projects

Invite students to choose an endangered animal to research and to create a presentation that includes where the animal is found naturally and the main cause/s of its endangered status. Incorporate technology by having students create multimedia presentations.

Layers of Life

There are four major layers in a tropical rainforest: emergents, the canopy, the understorey, and the forest floor (a more detailed description of each level can be downloaded from the Teacher Toolkit). Different life exists in each of these layers. As a class, create a to-scale rainforest bulletin board. Either draw or cut out pictures of rainforest animals and plants and place them in the appropriate level of your rainforest. Include illustrated facts as you accumulate them in your rainforest studies.

Class Debate

Host a class debate based on the topic 'Should there be zoos?' Divide the class into two groups, one for and one against the topic. Students should research the topic's respective pros and cons and present their findings to the class.

