

CHILDRENS FOREST BOOK

Simple guide to know the forest



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WHAT IS A FOREST?

A forest is any land containing vegetation with trees of different sizes of at least 10% tree cover. A forest produces wood and other products, influences climate, soil, water system and provides homes for wildlife.

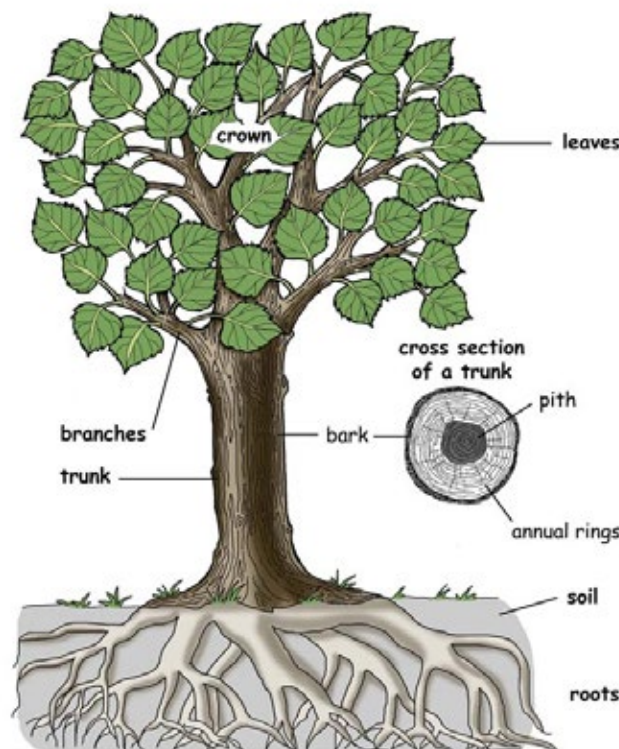
There are many forests in Kenya such as; Mau Complex, Mt. Kenya, Mt. Elgon, Aberdare forest, Cherangany, Kakamega forest, Ngong forest, Karura forest and many more.



WHAT IS A TREE?

A tree is a woody plant which has many branches supported on the ground by a single stem or trunk of up to 7-30 meters. Different trees have different growth forms, leaf types, shapes and barks. Example of trees include; Pine tree, Mahogany, Cypress, Eucalyptus, Teak, Olea Africana, Palm tree, Prunus Africana, Cedar, Acacia and many more.

Parts of the Tree



TYPES OF TREES.

SEASONAL TREES.

1. Evergreen trees.

The leaves remain green throughout the year. They have broad leaves that help conserve loss of moisture and survive in extreme conditions.

Examples, Cypress, Pine, Prunus Africana, Olea Africana, Warbugia Ugandensis and Eucalyptus.

2. Deciduous trees.

The trees shed their leaves usually as adaptation to cold or dry season, remaining bare until grow new leaves.

Example, Melia Volkensii (Mukau)



BOTANICAL TREES.

1. Hardwoods

The trees have broad leaves, produce fruits, flower or nut. Most produce a lot of leaves for shade and are resistant to wind damage.

Hardwoods are used for furniture, cabinets, moulding and other woodwork. Examples include, Meru Oak, Eucalyptus, Grivellea and Camphor.

2. Softwoods

The trees are evergreen and do not produce fruit or flowers. The trees seeds fall on the ground with no covering.

Examples include, Cypress, Pines and Casurina.



Origin.

1. Indigenous trees

Trees occur as a result of natural process, without help of man. The trees have been in a particular area and adapted to specific location without assistance of man.

Examples include, Olive tree, Cedar, Mvule tree, Silver Oak, Melia and Naivasha thorn tree.

2. Exotic trees

These are trees that do not naturally occur. They have been introduced by human actions.

Examples include; African mahogany, Pine tree, Cypress, Eucalyptus and Exotic bamboos.



Invasive Species.

Invasive species refers to trees that occupy the home of other species, forcing the original species to reduce in population or to disappear from their natural environment. Invasive species are always a threat to the new environment.

What makes a plant invasive species?

- Outcompetes other plants.
- Grows fast.
- Matures quickly
- Produces many seeds
- Short germination periods
- Lengthy seed viability
- Effective seed dispersal methods
- Ability to reproduce vegetatively
- Ability to use local pollinators
- Produce thick shade.

IMPORTANCE OF TREES

Today, the value of trees continues to increase and more benefits of trees being discovered in order to satisfy the needs created by our modern lifestyles. Trees are important because they;

- Generate oxygen that we breathe in and take in carbon dioxide we breathe out that we do not need.
- Act as a filter that clean the air we breathe by absorbing airborne particles, reducing heat and lowering air temperature.
- Absorb dangerous chemicals that have entered the soil, filters and clean the water which flows into our streams.
- Hold the soil tight on the ground, preventing it from being washed away by rain or wind.
- Reduce flooding by storing water in their stems, branches, leaves and roots.
- Provide Timber for furniture, houses, paper and fencing.
- A source of firewood used for cooking meals and keeping us warm.
- Used as medicine to cure diseases for example,Neem tree is said to cure more than forty diseases.
- Provide food for domestic animals like cows, goats and sheep and also provide sweet fruits for human beings like mangoes, oranges and berries.
- Provide home to several wild animals like zebras, monkey, elephants, giraffes and many more.
- Provide shade and reduces the need for air conditioning in hot weather.

Insert Image of tree highlighting different importance in the illustration



FORESTS IN KENYA

Kenya has a wide range of forests ranging from coastal forest, through central high mountain forests to the thick wet rainforest of the west. Forests are important in promoting the quality of human life and the environment.

Kenya has 3.456 million hectares of forest. Out of these, 1.406 million hectares in gazetted forests. Kenya's forests comprise of indigenous closed canopy forest, mangroves, plantation, bushlands and grasslands.

Forests can be either man-made or natural forests as seen below:-

MAN MADE FOREST

Forests established by man .

- These are plantation forests, mostly planted by people living in towns and cities around the area. Example blue gum plantations in Kericho.
- Mostly for production of Timber, Poles, Firewood, Pulp, Paper.

NATURAL FOREST

Forests that have grown without human intervention.

- They are a mixture of many types of trees growing together.
 - They provide food for animals and attract rainfall.
 - Natural forests are found in areas like Mau forest, Mt. Kenya, Cherang'any, Mt. Elgon, Aberdare forest amongst others.
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What is an Endangered Trees/Forest?

These are trees species existing in small numbers that expose it to danger of reduction as a result of human activities. Endangered tree is protected by law therefore making it an offense to cut, uproot, damage or destroy it without permission. An example in Kenya of endangered tree is Sandalwood. In Kenya when an endangered tree is protected, the Director, Kenya Forest Service must be notified before carrying out any work that may affect it. All trees in Kenya are protected under section 34 of the Forests Act, 2005.

IMPORTANCE OF FORESTS.

Most forests are found in the rural areas of Kenya. Due to low job opportunities and underdevelopment in these areas, most people living there are poor and hence rely on the forest resources for their daily survival.

Forests therefore provide a number of environmental, ecological, social and economic benefits as listed below:-

1. ENVIRONMENTAL IMPORTANCE.

- Forests situated in urban areas prevent noise pollution.
- Forests control the overall temperature of the earth and helps in preventing it from warming.
- Trees release pure oxygen for human beings and other animals' survival and take in carbon dioxide which we do not need.
- Trees reduce soil erosion, maintain fertility and water quality. They also control floods.



2. ECOLOGICAL IMPORTANCE.

- Forests are home to the largest existence of plants, animals, flora and fauna. For Example, Kakamega forest is a home to many different species of birds.
- Forests help in protection of wildlife and in the hydrological cycle.



3. SOCIAL IMPORTANCE.

- Firewood for the people living in the rural areas hence saving them from paying for electricity for cooking and heating.
- Poles from forests are used for building and fencing.
- Source of wild fruits and animals which are sources of food for the rural households.
- Traditional herbal medicines are harvested from forests for health care instead of buying from the pharmacy.
- Provide outdoor recreational activities such as hunting, fishing, picnicking, hiking, bird watching, nature study amongst others.



4. ECONOMIC IMPORTANCE.

- Charcoal used for cooking and also sold in Kenya by traders
- Poles used to build houses, fence homes, fix telephone lines among other home uses.
- Provide employment to many people like that the Kenya Forest Service and the Kenya Wildlife Service to qualified citizens.
- Provides tourist attraction supporting the tourism industry in turn supports our economy through earning of money from the tourists who visit the different kind of forests.
- Trees are used to make furniture, fencing poles and curios. People buy these products and traders get money from the sale of these products
- Natural honey is extracted from most of the natural forests such as Arabuko Sokoke, Kakamega, Mt Kenya among others.
- Medicinal plants are processed to produce herbal medicines which are bought at herbal shops, providing income to harvesters and traders.



PROBLEMS CAUSED BY DESTROYING TREES

Deforestation refers to the cutting down of trees, removal or destruction of forests for different activities like mining, farming, road construction or grazing of cattle. Clearing forests causes many serious problems like;



GOLDEN RULES TO PROTECT THE FORESTS IN KENYA.

- Protect the endangered trees which may be under threat therefore making it possible for the future generations to enjoy the trees too.
- Participating in national tree planting day whereby all youth plant trees and continually maintain the trees throughout the lifetime.
- Controlling how people use the forest. For example, Kenya Forest Service gives benefits to communities that participate in taking care of forests. These activities include collection of medicinal herbs, harvesting honey and grazing their livestock.
- Maintain the land use system where forests for farming, national parks, reserves and conservancy are kept in place for those reasons.
- Report the illegal cutting down of trees by the people whom live near the forest for timber, poles or charcoal to survive.
- Peer education on the benefits of trees and importance they have in our environment.
- Engage in alternative sources of energy as opposed to the wood energy. For example, solar energy and pulp energy for making paper.
- Cooperation from the citizens in helping the government and other organizations in protecting and conserving the forests. For example, report the Arsonists whom cause the fires in forests. Like that Kinale forest.

WORD LIST:

- Ornaments: Things used for decoration.
- Sculptors: An artist who carves or models in stone, clay or wood.
- Deciduous: Dropping of a part of a tree that is no longer needed, for example leaves
- Adaptation: To make suitable for a specific use.
- Invasive: Species that replace original species from their habitats but are not harmful to the environment.
- Outcompetes: To succeed in the presence of an organism that is competing for resources.
- Corporation: Formal business association which is publically registered and is recognized with its own privileges.
- Mandate: Power.
- Obligates: Cause to do or act in a specific manner
- Sustainable Management: Using natural and physical resources carefully so that the future generation can also be able to enjoy the same resources.
- Gazetted: To announce or publish in a gazette.
- Indigenous: Occuring naturally in area or environment.
- Barbeques: French noun for meat
- Hydrological cycle: The circulation of the earth's water, in which water evaporates from the sea in to the atmosphere, where it condenses and falls as rain or snow, returning to the sea by rivers.
- Flora: Plants
- Fauna: Animals
- Arsonists: A person or people who sets fire on one's own property without proper reason.

