

# What Is a Tree?

by  
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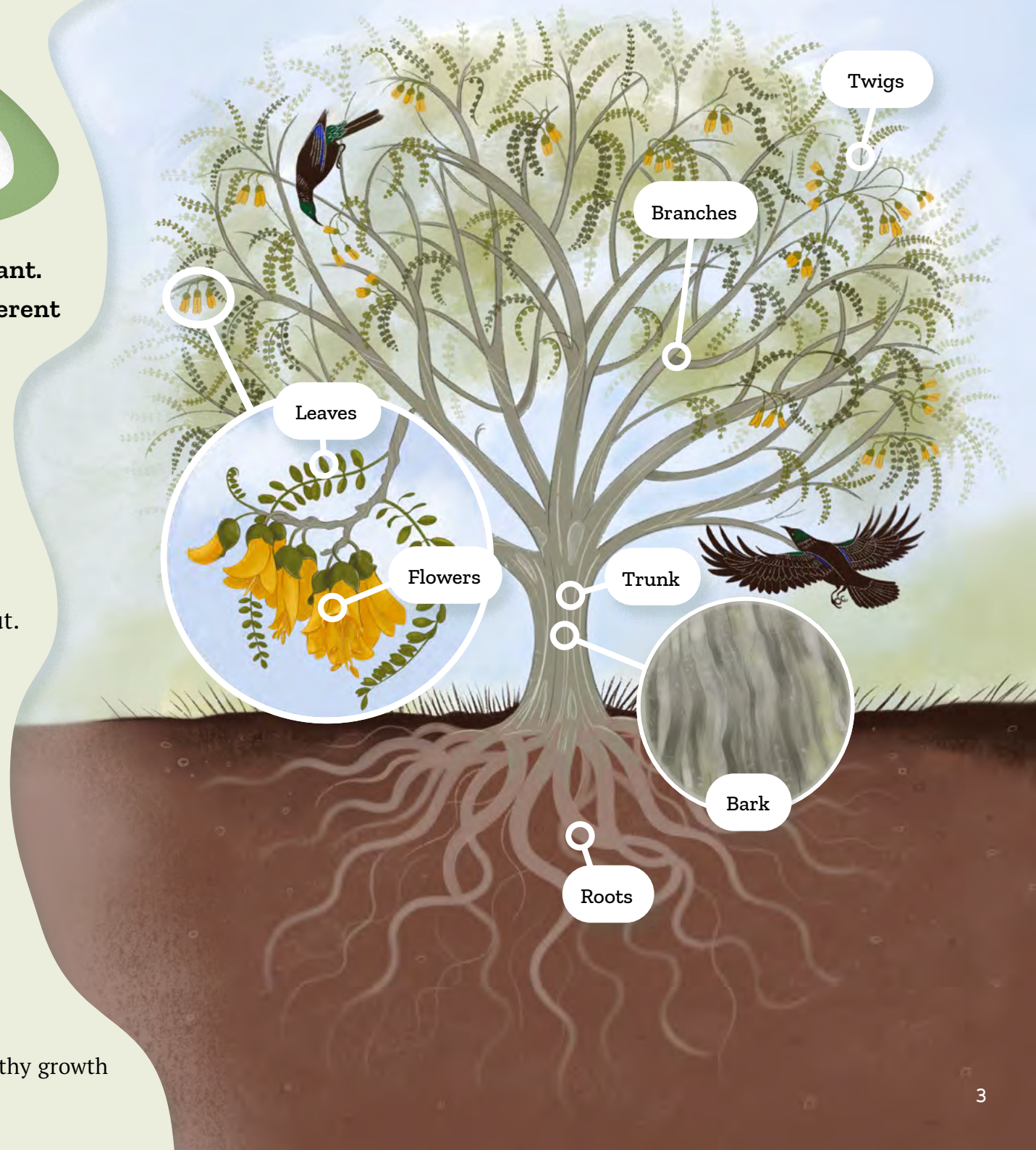
A tree is a type of plant. Grass is also a plant. So are vegetables. What makes a tree different from these other plants?

## The parts of a tree

A tree is a tall plant with a thick trunk covered in bark. The bark is like a skin that protects the trunk and stops it from drying out. Most trees have branches growing out from their trunks and twigs growing out from their branches. Leaves and flowers grow along the twigs.

Under the ground, trees have a network of roots. Sometimes these are as big as the part of the tree you can see above ground. The roots anchor the tree into the ground. They also take in water and **nutrients** that the tree needs to live.\*

\* **nutrients** – substances that are needed for healthy growth





## How long do trees live?

All trees are **perennial**, which means they live for more than two years – and some live much longer than this.\*

As a tree grows, its trunk gets thicker. It grows a ring of new wood each year. You can tell how old a tree is by counting the rings. (But you have to cut down the tree to do that!)

Tāne Mahuta is a kauri tree in Northland. It is over 50 metres tall, and its trunk is more than 13 metres around the outside. Tāne Mahuta is between 1,250 and 2,500 years old.

\* Some plants are **annuals** – they live for only one year or less, and some plants are **biennials** – they live for two years.

## Endemic, native, and introduced trees

Aotearoa New Zealand has many trees. Some of these trees are endemic – they were here before people arrived in the country and are not found anywhere else in the world.

### ENDEMIC



Rimu



Kawakawa

### NATIVE

Some trees have always been here but can be found in other countries as well. These are called native trees.



Mānuka



Whauwhaupaku / Five finger

### INTRODUCED

Over time, people have brought new trees to Aotearoa. These trees are called introduced trees.



Radiata pine



Silver birch



## Evergreen and deciduous trees

Some trees keep their leaves all year – they are evergreen. Other trees have leaves that change colour and fall off in autumn. These trees are called deciduous trees. Deciduous trees spend the winter without leaves and grow new ones in spring.

Most native and endemic trees in Aotearoa are evergreen, including kauri, pōhutukawa, and kōwhai. Only a few of our native trees lose their leaves in autumn. Many of our introduced trees, including fruit trees, are deciduous.



## Where trees live

Different trees grow best in different places. Kauri like very warm weather and can live in dry soils. This is why they grow best in the north of New Zealand. Pōhutukawa can grow in areas with very little soil or fresh water so are often found in rocky areas by the sea. Mānawa or mangrove trees are the only trees that can grow in sea water. Their roots filter out most of the salt in the sea water so it doesn't harm them.

Pōhutukawa



Mānawa





# Photosynthesis – how trees make food

Trees use energy from the sun, carbon dioxide from the air, and water to make the food they need. This process is called photosynthesis.

Photosynthesis happens inside the leaves of trees. Carbon dioxide gets into the leaves through tiny holes. Water comes through the roots, up the tree trunk, and along the branches to the leaves. The leaves catch energy (warmth and light) from the sun.

Carbon dioxide

Oxygen

The air around us is a mixture of gases. These gases include oxygen and carbon dioxide. Oxygen is the gas that most animals, including humans, need to live. Carbon dioxide is the gas that trees need for photosynthesis.

The leaves mix the carbon dioxide, water, and energy from the sun to make sugars. These sugars are the food the tree needs to live and grow.

Photosynthesis also produces oxygen. Some of the oxygen is used by the tree, but some comes back out of the leaves through the tiny holes and into the air for us to breathe.

Photosynthesis is important for trees, but it is also important for all life on Earth.



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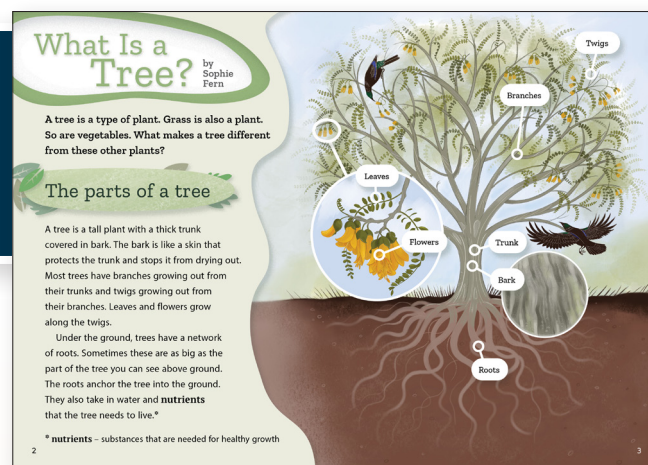
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