

The Life Cycle of a Tree

The journey a tiny seed takes to become a mature tree is truly remarkable! Each stage is essential for the development of the tree and the whole cycle can take many years. Even when a tree dies, it still has an important role to play for the wildlife in its environment: dead trees provide shelter, food, and nutrients for birds, insects, and fungi.

During the first stage of the cycle, the seed sprouts into a small seedling, then it grows into a sapling, eventually maturing into a strong tree able to make seeds of its own. When old trees die nutrients are returned to the soil.

1. Starting as a seed

Every tree begins as a small seed. This contains everything the tree needs to grow. When it has received enough water, sunlight, and nutrients the seed begins to germinate: it opens and a small root starts to grow and push into the soil, anchoring itself and taking in the water and nutrients it needs to get bigger.

2. The seedling

First the root of the seedling sinks downwards. Then the shoot and small seedling leaves unfold upwards and stretch towards the sun. The energy for this process comes from the seed's supply of starch.

3. The sapling

The plant continues to grow, forming its first leaves. With their help, food is produced for the tree and oxygen for the air we breathe. The plant is still small, but it already has strong roots that grow deeper and deeper into the earth. The plant is now able to create the energy it needs for its own growth.

4. Gaining strength

Once the tree grows a bit taller and thicker, it becomes a sapling. This stage is marked by lots of growth and the development of more branches and leaves. The roots continue to spread outwards and downwards, forming a strong network to support the tree.

5. Becoming a young tree

As the sapling continues to grow, it develops into a young tree with a crown of leaves and a thicker trunk. The young tree is now more resilient, meaning it can cope with challenging weather, such as strong winds and heavy rain. The roots help the tree stay steady during difficult conditions.

6. Reaching full size

A tree is said to be mature when it has reached its full height and width. This is the stage when it starts to produce seeds, fruits, or nuts, depending on the species. The mature tree is an essential part of its environment and already helping wildlife. By now, the root system reaches well beyond the tree's crown, supporting the tree and storing nutrients and water.

8. Decay and renewal

Eventually, the tree may die and fall to the ground. Its wood and roots break down and become part of the soil, enriching it with nutrients. These nutrients help new plants and trees to grow, continuing the cycle of life in the forest!

7. Slowing down

As the tree enters old age, its growth slows down and it may show some signs of damage from weather. It may not produce as many leaves, fruits, or seeds as before but it is still very important, as it continues to provide a home for wildlife. As with the branches and leaves, the growth of the roots slows down.

