



# Commercial Forests

Commercial forests are forests which are grown and managed for all of us. They produce wood, and wood is used to make all kinds of products that we need and use daily.

In Finland, the annual forest growth is higher than the amount of wood used. Forests grow and develop according to a certain pattern. In commercial forests, the development stages are as follows:



1. Seedling stand → 2. Young forest → 3. Mature forest → 4. Regeneration area → 1. Seedling stand → 2. Young forest

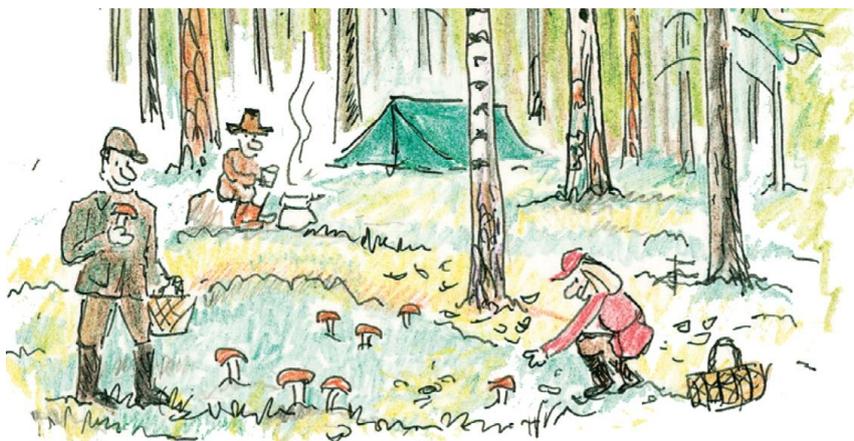
Another way to manage forests is to remove only single, yet big, trees. The phases 1-4 that are illustrated above cannot then be distinguished from each other. This method is called continuous cover forestry.

As forests are managed and used, it is important also to maintain biodiversity. This is achieved best when there are different types of forests with many kinds of living environments (habitats) for different plant and animal species.



Commercial forests also produce other things besides wood. In Finland, everyman's rights allow everyone to do many things in forests, such as pick berries and mushrooms. Hunting and game management are also popular leisure pursuits, though they are not part of everyman's rights.

What do you like doing best in a forest? \_\_\_\_\_



# 1. Seedling stand

The small trees in a seedling stand have no commercial value. Tending a seedling stand is important because in a too dense stand, the trees won't grow well. Weak trees are removed in thinnings, and the best seedlings are left to grow.

When commercial forests are thinned, the remaining trees will have enough of everything they need and they will grow well.

In order to live, trees (just like other plants) need \_\_\_\_\_ , \_\_\_\_\_ and \_\_\_\_\_ .

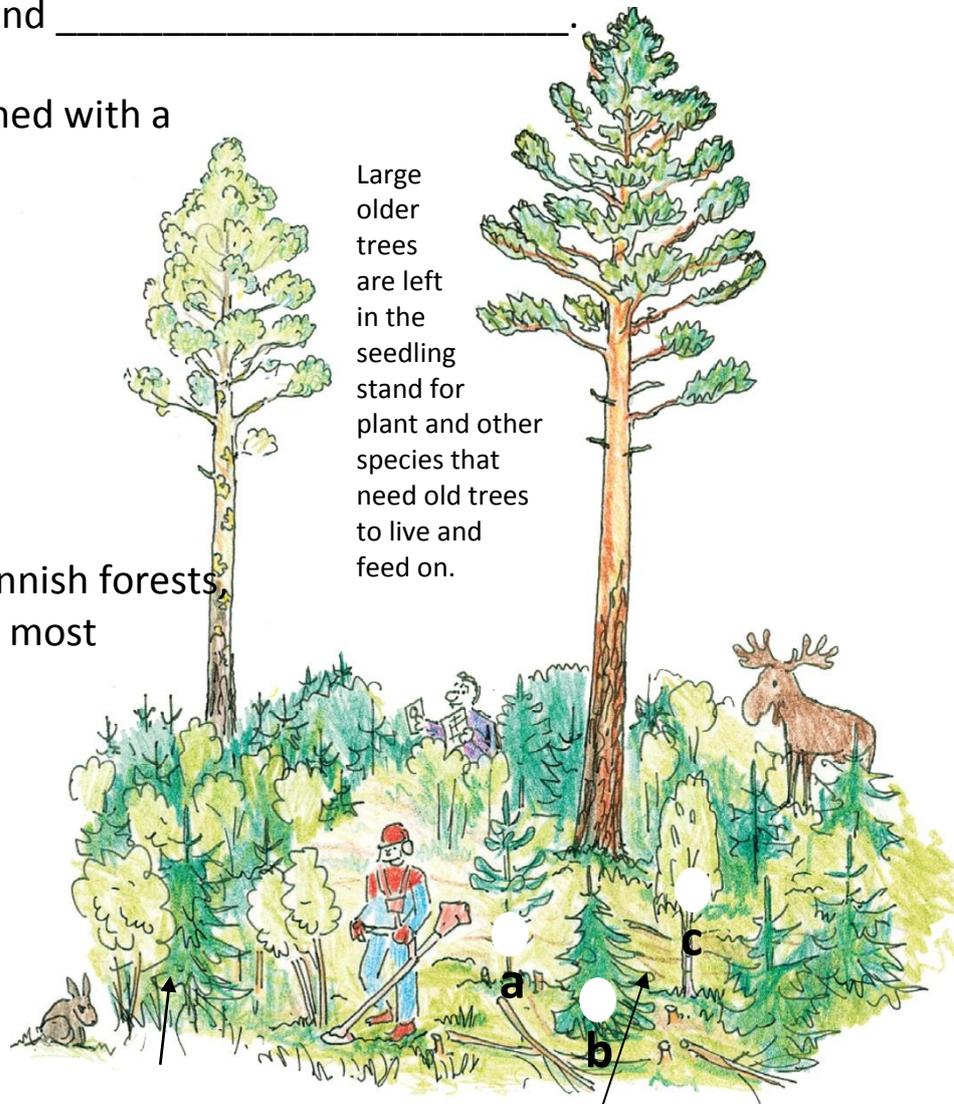
Seedling stands should be thinned with a



- Fret saw
- Bow saw
- Clearing saw

Three tree species dominate Finnish forests. They are also commercially the most valuable. Which are they?

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_



Large older trees are left in the seedling stand for plant and other species that need old trees to live and feed on.

Seedlings too close together.

Thinning makes enough space for each remaining tree.

Which animals feed in a seedling stand?

\_\_\_\_\_

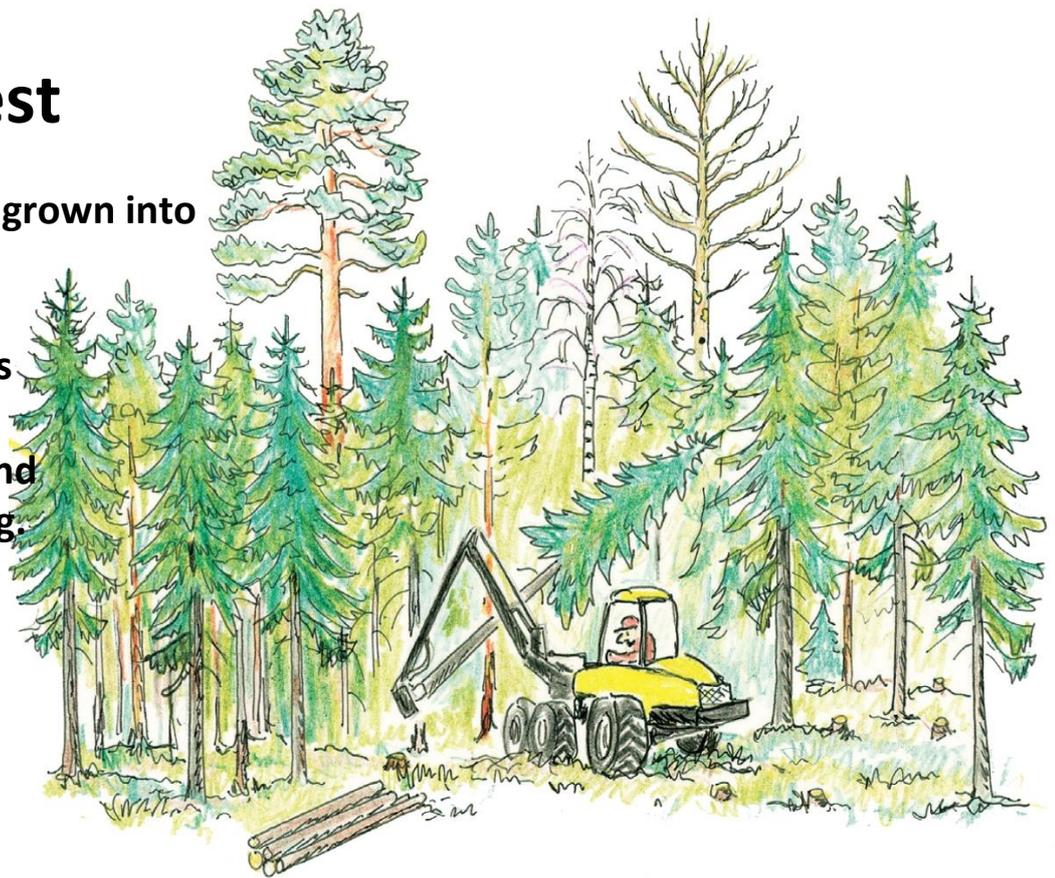
## 2. Young forest

The seedling stand has grown into a young forest. It, too, is thinned further.

The forest worked sorts the trees into those to be removed and those to be left growing.

The machine that does the felling is a

- Front loader
- Cultivator
- Harvester



Thinning young forests mostly give wood for making pulp which is made into paper. This picture shows some products of the pulp industry. Can you name them?

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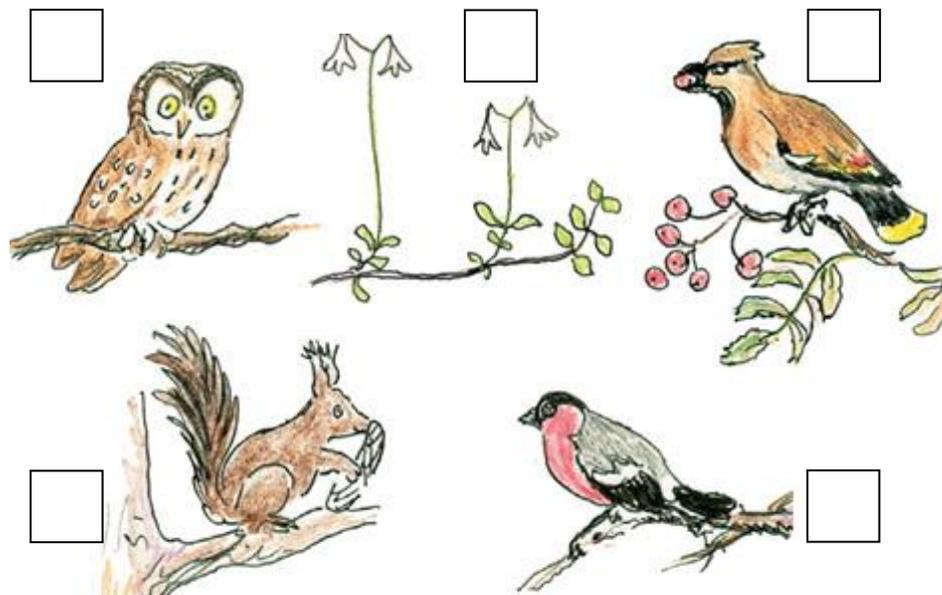
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These are some of the animals and plants that you can see in young forests. Put the correct letter in each box.



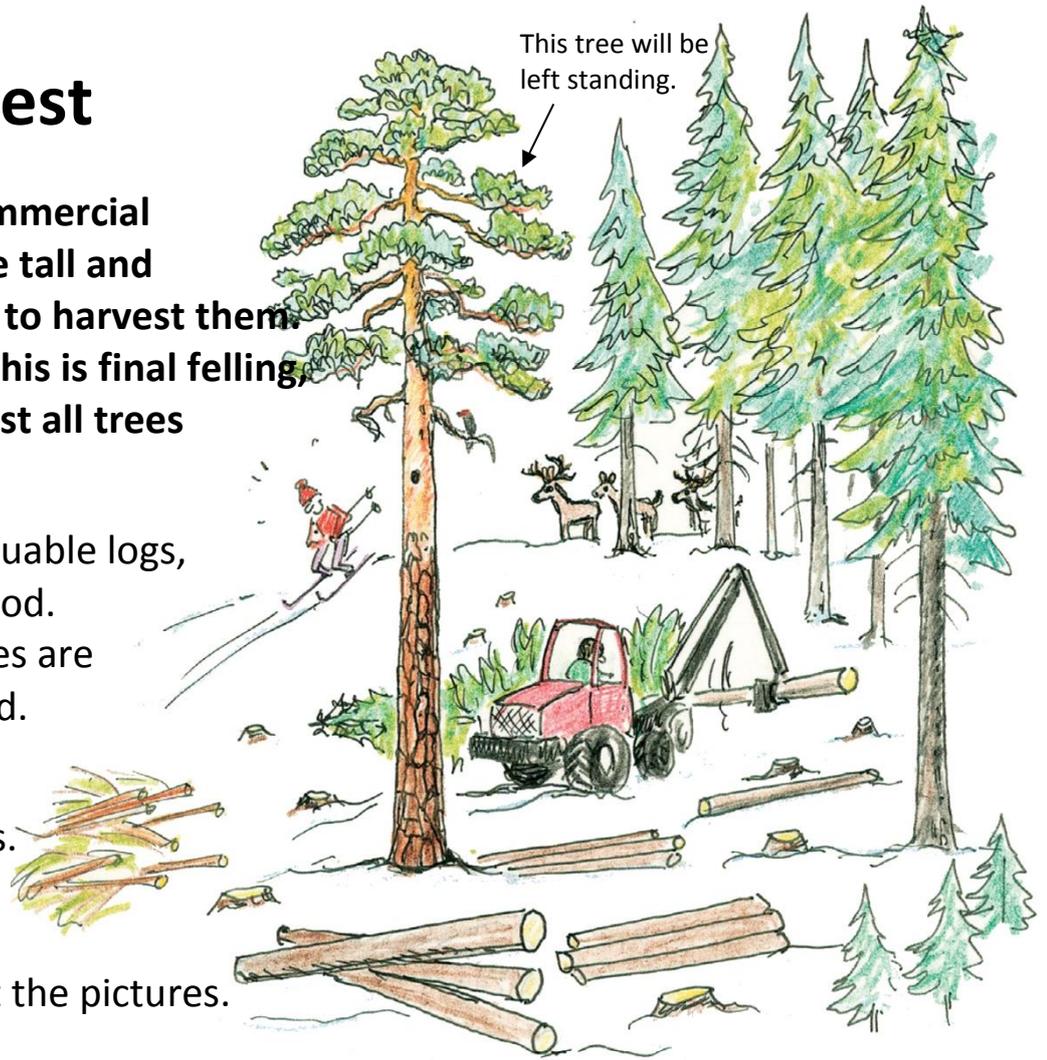
- A) Bohemian Waxwing
- B) Boreal Owl
- C) Eurasian Bullfinch
- D) Twinflower
- E) Squirrel

# 3. Mature forest

When the trees in a commercial forest have grown to be tall and stout enough, it is time to harvest them. One of the ways to do this is final felling, which means that almost all trees will be felled.

This felling produces valuable logs, but also thinner pulpwood. The crowns and branches are used as energy wood.

Logs can be used for many different products. Can you name some of them? You can think of them yourself or look at the pictures.



This tree will be left standing.

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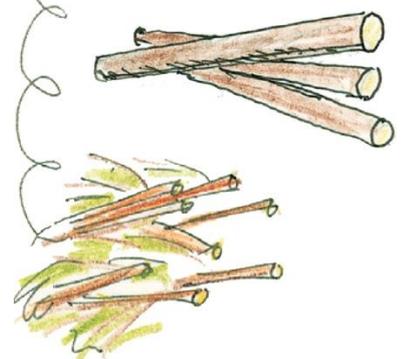
What would a musician use a log or energy wood for?

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What bird is this? \_\_\_\_\_

Look for its nest in the picture at the top.

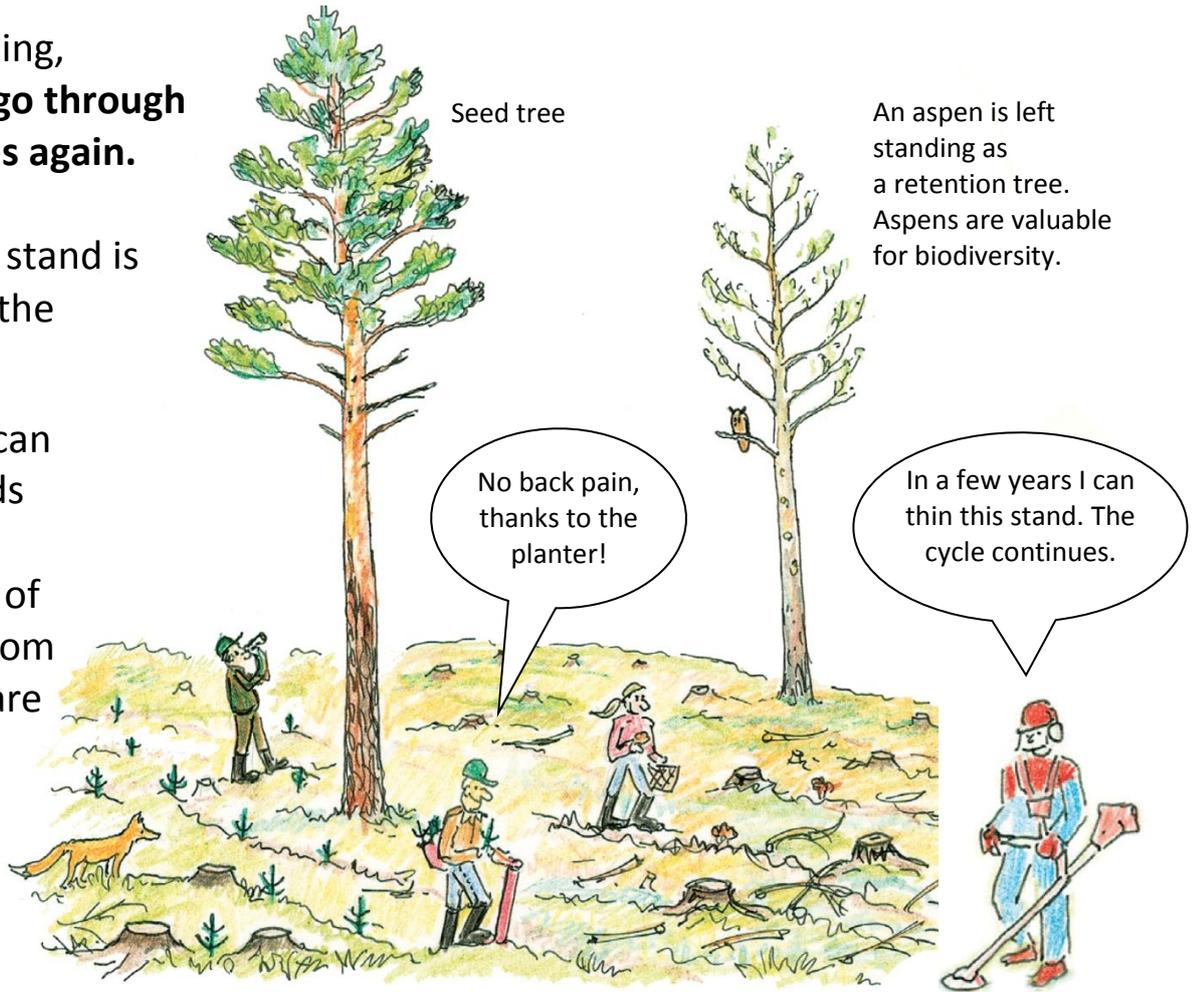


# 4. Regeneration area

After a final felling, **the forest will go through the same stages again.**

A new seedling stand is established on the felling site.

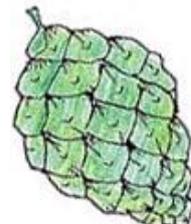
The new trees can grow from seeds that are sown, from the seeds of seed trees or from seedlings that are planted.



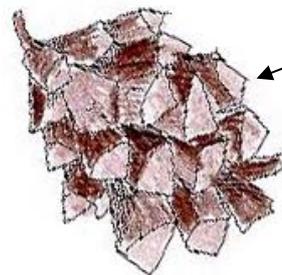
An aspen is left standing as a retention tree. Aspens are valuable for biodiversity.

Seedlings are grown from seeds in a tree nursery. The seeds are collected from pine and spruce cones.

Which tree species do these cones belong to?



Here the seeds are still maturing.



Here the ripe seeds have fallen out.



In forest clearings you may find false morels. Which is the best time to find them?



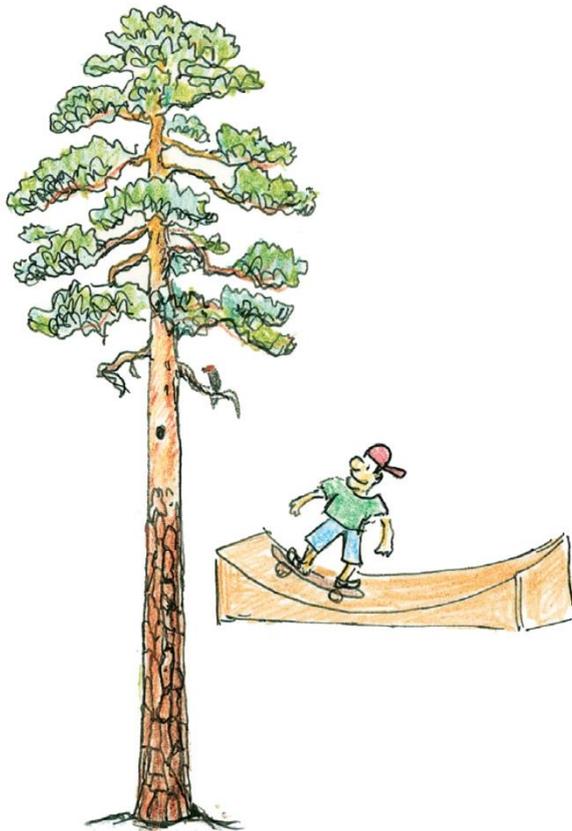
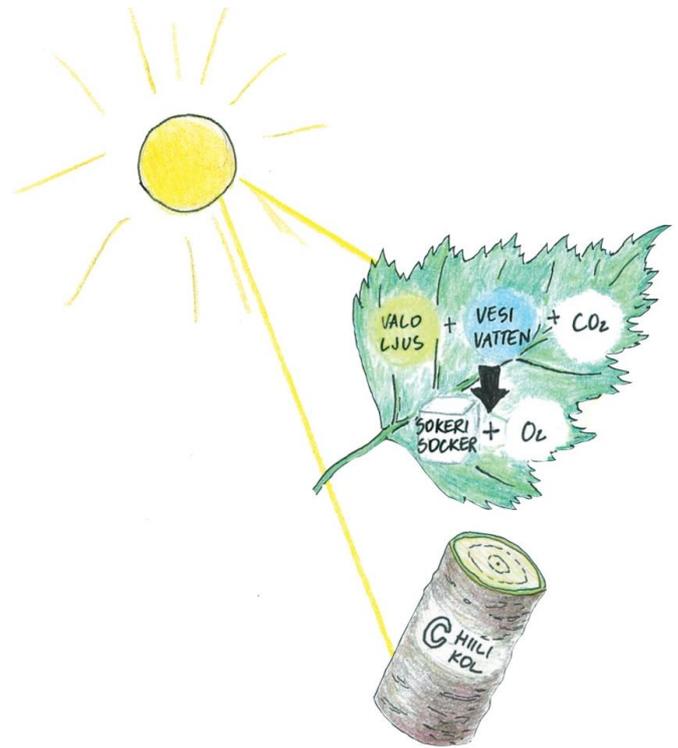
- Spring
- Autumn
- Winter

False morels are delicious, but before cooking them, you must boil them twice for five minutes in plenty of water and rinse carefully after each boiling.

# Forests and climate change

Trees use sunlight to convert water and carbon dioxide (which is contained in air) into sugar and oxygen. This process is called photosynthesis.

The carbon in carbon dioxide is held, or 'sequestered', in wood. The carbon will remain in the wood for as long as the wood, or any product made of it, exists.



A living tree, a wooden skateboarding ramp, and even the skateboard itself, are carbon storages.

The more carbon dioxide can be trapped from the air into wooden products and other things, the better we will be able to mitigate the climate change.

## **Further information**

Finnish Forest Association  
[www.smy.fi/teach-learn/](http://www.smy.fi/teach-learn/)