



Beech Forest

The beech forest is something special among the deciduous forests of Northern Europe. Since the last Ice Age beeches spread out over Europe in the temperate zone. Many woodlands were cleared and completely destroyed to use the wood and later to develop agriculture and industry.

In springtime, the trees sprout fresh light green leaves, which are entire and ciliated. In this season, sunlight can reach the ground through the tree crowns and this enables many early flowering plants, for example thimbleweed, woodruff or ramson and some grasses to grow. During summertime the canopy of leaves gets very thick and in the shadow underneath just a few plants grow, mostly young beeches. We sometimes find other trees or orchids. In autumn, leaves change colour and fall to the ground. The triangular beech nuts do the same. They are food for many animals in the forest. During winter beech trees are bare, the fallen leaves nourish the soil and give shelter to small animals. Many endangered bug, insect and bird species survive inside and under old trees and in hollows.

Beech trees can grow to about 130 feet high and reach the age of 300 years.

Fortunately there are still some ancient, primeval beech forests left in Germany. In this undisturbed wilderness we have germlings, tree giants and rotting deadwood side by side. These are natural habitats for many living creatures. That's the reason these beech forests have been protected since 2011 and why they are on the UNESCO World Heritage List.

Terms:

Beech: *Fagus sylvatica*

UNESCO: **United Nations Educational, Scientific and Cultural Organization**



Worksheet beech forests 1 Please work with a partner.

1. Which plants do we find in beech forests?

b__c__s

th__bl___ed

r__so__

w___r__f

gr____s

o_c___s

other t__e sp_c____

2. Which special animals do we find in beech forests?

Endangered species of b___, i___c__ and _ir__

3. Write a profile of the beech:

scientific name: _____

height: _____

age: _____

leaves: _____

flower: _____

distribution / climate: _____

additional information: _____

4. What is made of beech wood in your home?

odor elbta irhac terpaqu rodapcub uerlr meافر-urecپت ysto

Worksheet beech forests 2 Please work with a partner.

Tick the right answer, work out the answer!

5. Why are the ancient beech forests under protection?

- a) Because they are beautiful.
- b) So that we can cut them down better.
- c) Because they are natural habitat for many animals and plants and they should not be cut down.

6. What is the difference between protected woodland and a commercial timberland?

- a) Nothing – both are full of trees.
- b) Timber from protected woodland is higher in price.
- c) In protected woodland the trees are not cut down but may get very old and rot, so they give shelter and habitat to many endangered animals.

7. What can I do to protect woodland?

- a) Nothing.
- b) Go for a walk.
- c) Don't leave rubbish in the forest, don't pollute the environment.

8. Arithmetical problem:

One beech with 300 000 leaves turns over 5 kg carbon dioxide CO₂ a day and produces 3.5 kg oxygen O₂ under the light of the sun.

- a) How much O₂ can a forest with 100 beeches produce during one sunny week?

- b) In the air about one fifth is oxygen and every human breathes in about 12000 litres air on one day. From this it follows that one person breathes in about 3.5 kg oxygen a day. How many beeches does a person need to get enough oxygen for air to breathe? (The density of air is 1.29 g/l)