

Additional Information for Teachers:

Beech forests are deciduous forests in the temperate zone of the Northern hemisphere. There are 14 species of beeches worldwide but after the last glacial period the European beech (*Fagus sylvatica*) in particular spread out across Europe and mostly across Germany.

Beech flowers in March/April, when foliation also starts. Beeches are monoecious and flower from the age of about 30 years.

The triangular beechnuts are poisonous when eaten in large quantities.

Beeches can grow in the shade under the foliage and on various sites and soils in Central Europe.

In 2011 five ancient beech forests in Germany came under the protection of the World Heritage "Primeval Beech Forests of the Carpathians and Ancient Beech Forests of Germany". These protected areas serve to preserve the specific characteristics and uniqueness of the different altitudinal zones from the seaside to the mountains.

Each beech forest is a typical habitat for various species of plants and animals and very special because of its geographical and climate conditions. Detailed information can be found in a brochure by the „Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU)“ (http://weltnaturerbe-buchenwaelder.de/fileadmin/media/bildmaterial/Ver%C3%B6ffentlichungen/FB_WNE_2014.pdf, Zugriff: 17.1.2015)

Beech forests do not reach their natural regeneration cycle, which includes growing, reproduction, aging, deadwood and rotting, for 250 years. But then they provide the whole diversity of habitats for a great number of living creatures. Many forests contain biotopes like lakes, ponds, streams, moors, rocks and caves and their typical environments.

Answers to the worksheet:

1. beeches, thimbleweed, ramson, woodruff, grasses, orchids, other tree species
2. bugs, insects and birds
3. *Fagus sylvatica*; up to 130 ft; up to 300 years; entire and ciliated leaves; in springtime; beechnuts (triangular); Northern or Central Europe, temperate zone; (leaf tree/ foliage tree, deciduous, reddish wood)
4. door, table, chair, parquet, cupboard, ruler, picture-frame, toys
5. c)
6. c)
7. c)
8. a) $3,5 \text{ kg} * 100 * 7 = 2450 \text{ kg}$
b) One, but to be precise, one throughout the whole year because beeches don't have leaves during winter to produce oxygen. Therefore, human beings need other trees or evergreen plants.