

Unit 3 Continued **Chapter 6 – Sustainable Forestry**

Section 6.1

A forest is an ecosystem in which the dominant plants for _____

Nearly _____% of Canada's land is covered by forests

The types of forests in Canada are:

1. _____ rain forests as in British Columbia near to the coast
2. _____ forests as in Saskatchewan's north
3. _____ Forest in southern Ontario
4. _____ forest in the Atlantic Provinces.

Read about these types of forests on page 176 and 177 and make some notes for each above

Basic structure of forests and their biodiversity

1. The _____
 - The canopy is made up of _____ and branches of tall mature trees which form an umbrella-like cover that _____ the rest of the forest. The canopy is a habitat for animals such as _____ and insects as well as for other kinds of plants. In rain forests species of _____ live in the canopy and spend most of their lives there.
2. The _____
 - The understory is made up of young trees, _____, and bushes that are adapted to living in the _____.
 - Trees such as _____ and berry shrubs survive in this region. Animals such as _____, birds, and bats live in here. In rainforests, _____ live in the understory.
3. The Forest _____

- The forest floor is made up of decomposing _____ and trees, animal droppings, and other _____ matter.

In tropical rainforests _____ occurs very quickly due to high temperatures and _____.

The breakdown of all this material is an important part of the _____ cycle in the forest ecosystem.

_____ and phosphorus are released into the soil and taken up by the trees ferns and wildflowers. Birds, _____, and amphibians live on the forest floor.

_____ is wood that is used for construction and _____. This is the major resource found in the forest.

Non timber resources include food such as mushrooms, _____, wildflowers, and berries. Medicine and personal Care Products are used from the _____ of trees in the forest.

Materials for wood _____ and activities related to _____ are also resources of the forest.

_____ is a branch of forestry related to the development and management of forest _____.

This practice helps ensure sustainable forestry for the future by managing harvest of timber, selective _____ strategies, and shelterwood systems (shelter belts strategically left to protect developing timber)

_____ removes all of the trees from a chosen area of the forest. Advantages of this method are that is safe, _____ effective, and _____ a large scale natural disturbances such as fires. The area can be easily _____.

Some disadvantages include the complete _____ of species of trees and animals in a large area. It takes a long time to _____ this area and also reduces the recreational value of the area.

Selective cutting includes removing _____ aged or mature trees individually in small _____ every 10 to 20 years.

This method can retain some _____ for species and can be more aesthetically pleasing than clear cutting, but may incur higher cost and risk _____ of remaining trees during the process.

Sustainable forestry includes protecting _____, harvesting timber sustainably, leaving _____ material in place, and regenerates _____ after harvesting.

This sustainable forestry _____ and other certifications ensure sustainable forestry with high _____ of timber harvest. _____ is seen as a leader in certified timber harvest.

Section 6.2

_____ forestry is the long-term planning, _____, and maintenance of forests, trees, and _____ spaces in urban environments.

The _____ island effect in urban areas are higher temperatures than surrounding rural areas because of heat absorbed by _____ and asphalt. Urban forests can reduce the heat island effect.

_____ plants are plants that have been growing naturally in the region for many years. Often urban planting includes planting native plants in cities.

_____ management also ensures health of urban forests.

Read the case study on page 19 the of national urban Parks and make at least three important notes below.

Determining the age of trees.

In trees, the production of _____ throughout each year produces rings which are often called _____ rings or tree rings.

Scientists can analyze annual growth rings to determine the _____ and growth rate of the tree. In a cross section of a tree that grows in a temperate climate such as Southern Ontario, an _____ light and dark ring represents one year of growth. The light part of the ring is growth that occurs in the _____ and early summer and that _____ parts marks the growth near the end of the season.

Environmental conditions such as _____, temperature, amount of _____, can all influence the width of the rings. For example, in dry years the rains are much _____, while in years with plenty of rainfall the rings are much _____.

Other things that may affect the width of a ring include _____ infestation, disease, and _____ disaster. Some tree rings show damage from fire called fire _____.