

Envirothon New Brunswick

FORESTRY LEARNING OBJECTIVES

Key Point 1—Forestry in New Brunswick

Knowledge of the history of forestry in New Brunswick, land tenures, New Brunswick forestry statistics, legislation and regulations, forest certification, and the duty to consult with Aboriginal Peoples.

Key Point 2—Forestry in Canada

Knowledge of Canadian forestry statistics, land tenures, our changing forest, and sustainability of Canadian forests.

Key Point 3—Tree Physiology and Tree Identification

Know the parts and tissues of a tree, twig, and leaf and be able to explain how a tree grows. Know what dendrochronology is and how it can be used to understand past environmental conditions. Understand the processes of photosynthesis and respiration and be able to identify common tree species without a key, and identify specific or unusual trees using a key.

Key Point 4—Forest Ecology

Knowledge of the typical crown classes of trees and of the Forest Regions of Canada, particularly the Acadian Forest Region and the Boreal Forest Region. Understand forest ecology concepts and factors affecting them, including forest succession, shade tolerance, forest soils, forest fires, and the ecosystem services that our forests provide.

Key Point 5—Forest Management

Understand the various silvicultural treatments associated with reforestation, stand improvement, stand regeneration, and harvesting in even-aged and uneven-aged forest management systems and the types of products that our forests provide.

Key Point 6—Forest Measurements

Be able to recognize some basic features on aerial photographs and know how to determine distances and area on aerial photographs. Knowledge of how to use forestry tools and equipment to measure tree age, diameter, and height as well as stand measurements of density, basal area, and stocking. Knowledge of LiDAR technology and how it is used in enhanced forest inventory in New Brunswick.

Key Point 7—Forest Health

Identify the abiotic and biotic factors in a forest ecosystem, and understand how these factors affect tree growth and forest development. Consider factors such as climate, insects, microorganisms, and wildlife.

Key Point 8—Climate Change and Canada's Forests

Knowledge of the impacts of climate change on Canada's forests.