

FORESTRY LEARNING OBJECTIVE	TERMS AND CONCEPTS	TOOLS	USEFUL RESOURCES (not an exhaustive list)
Identify the major forest regions of Canada			<b>Forest Regions/Types/Species</b> <a href="http://www.canadianforestry.com/html/forest/forest_regions_e.html">http://www.canadianforestry.com/html/forest/forest_regions_e.html</a>
Identify the main tree species and forest types in Newfoundland and Labrador	Boreal Forests		<a href="http://www.sfmcanada.org/english/map.asp">http://www.sfmcanada.org/english/map.asp</a> <a href="http://www.sfmcanada.org/english/bp_ecosystem.asp">http://www.sfmcanada.org/english/bp_ecosystem.asp</a>
Describe typical forest stand types	Softwood, Mixed wood, Hardwood		<a href="http://www.nr.gov.nl.ca/nr/forestry/index.html">http://www.nr.gov.nl.ca/nr/forestry/index.html</a>
What is forest ecology? What concepts, factors and relationships are important in forest ecology?	Tree communities, Regeneration, Competition, Succession, Even/uneven aged forest		<b>Forest Ecology</b> <a href="http://www.nrcan.gc.ca/com/elements/issues/59/video-eng.php?PHPSESSID=4ecc441a6f827b5f31ddf4c69b82be2b">http://www.nrcan.gc.ca/com/elements/issues/59/video-eng.php?PHPSESSID=4ecc441a6f827b5f31ddf4c69b82be2b</a>
Be able to explain the importance of the forests to the people, history, natural environment and economy of Newfoundland and Labrador			<a href="http://www.nifatrees.org/Eco_Disturbance.html">http://www.nifatrees.org/Eco_Disturbance.html</a>
Describe the value added industry in NL	Value Added manufacturing		<a href="http://www.bethelcollege.edu/users/berkebj/Marian/plant%20succession%20lecture.pdf">http://www.bethelcollege.edu/users/berkebj/Marian/plant%20succession%20lecture.pdf</a>
Identify non-timber products derived from the forests of NL	Non-timber forest products		<a href="http://www.canfor.com/treeschool/library/files/ecology.asp">http://www.canfor.com/treeschool/library/files/ecology.asp</a>
Provide common and Latin names for the most common NL trees (Balsam fir, white spruce, black spruce, larch, white birch) and identify these trees (without a key) from needles, leaf and bark etc.			<b>Forest Industry</b> <a href="http://www.nr.gov.nl.ca/nr/forestry/industry/services.html">http://www.nr.gov.nl.ca/nr/forestry/industry/services.html</a> <a href="http://www.fpac.ca/index.php/en/">http://www.fpac.ca/index.php/en/</a>
Identify less common NL trees and shrubs through the use of a key			<b>Non-Timber Forest Products</b> <a href="http://www.fromouratlanticwoods.com/en/newfoundland_and_labrador">http://www.fromouratlanticwoods.com/en/newfoundland_and_labrador</a>
Explain tree growth from photosynthesis to branch growth, from trunk growth to the role of roots			<a href="http://cfs.nrcan.gc.ca/pages/150">http://cfs.nrcan.gc.ca/pages/150</a>

Understand how wildlife habitat relates to forest communities, forest species, forest age structure and availability of food/homes	Snags, Den trees, Riparian zones		<p><b>Sustainable Forest Management</b>  <a href="http://www.sfmcanada.org/english/pdf/SFMBooklet_E_US.pdf">http://www.sfmcanada.org/english/pdf/SFMBooklet_E_US.pdf</a>  <a href="http://www.nr.gov.nl.ca/nr/forestry/management/sfm.pdf">http://www.nr.gov.nl.ca/nr/forestry/management/sfm.pdf</a>  <a href="http://cfs.nrcan.gc.ca/pages/132">http://cfs.nrcan.gc.ca/pages/132</a></p> <p><b>Certification</b>  <a href="http://www.sfmcanada.org/english/sfm.asp?tID=5">http://www.sfmcanada.org/english/sfm.asp?tID=5</a>  <a href="http://cfs.nrcan.gc.ca/pages/144">http://cfs.nrcan.gc.ca/pages/144</a></p> <p><b>Harvesting/silviculture Systems</b>  <a href="http://www.sfmcanada.org/english/topics-harvesting.asp">http://www.sfmcanada.org/english/topics-harvesting.asp</a>  <a href="http://www.borealforest.org/world/innova/harvesting.htm">http://www.borealforest.org/world/innova/harvesting.htm</a>  <a href="http://www.nr.gov.nl.ca/nr/forestry/management/silviculture/index.html">http://www.nr.gov.nl.ca/nr/forestry/management/silviculture/index.html</a>  <a href="http://www.mnr.gov.on.ca/en/Business/Forests/2ColumnSubPage/STEL02_166048.html">http://www.mnr.gov.on.ca/en/Business/Forests/2ColumnSubPage/STEL02_166048.html</a></p> <p><b>Forest Inventory Equipment</b>  <a href="http://dendro.cnre.vt.edu/forsite/Equip.htm">http://dendro.cnre.vt.edu/forsite/Equip.htm</a></p> <p><b>Natural Forest Disturbance (fire, insects, wind, wildlife)</b>  <a href="http://cfs.nrcan.gc.ca/pages/48">http://cfs.nrcan.gc.ca/pages/48</a>  <a href="http://cfs.nrcan.gc.ca/pages/153">http://cfs.nrcan.gc.ca/pages/153</a>  <a href="http://cfs.nrcan.gc.ca/pages/155">http://cfs.nrcan.gc.ca/pages/155</a>  <a href="http://www.nr.gov.nl.ca/nr/forestry/insect-disease/index.html">http://www.nr.gov.nl.ca/nr/forestry/insect-disease/index.html</a></p>
Discuss harvesting techniques/methods and where/why selected	Clear cutting, selective harvesting, riparian zones		
Describe the uses of the main tree species harvested in NL	Hardwood, softwood, pulp, lumber		
What is silviculture? Understand the various components of silviculture	Scarification, Site preparation, pre-commercial thinning, harvesting techniques, Best Management Practices etc.		
Identify the different concerns and issues that are incorporated into forest management	Environmental Recreation Wildlife Aesthetics Economic Sustainable Forest Management		
Explain the role that fire and insects play in boreal and other forest ecosystems			
Describe and be able to identify the principle insects, diseases and other wildlife that affect NL's forests. Know common and Latin name for 4 main insect pests in NL.	Balsam Fir Sawfly Hemlock Looper Spruce Budworm Spruce Bark Beetle Butt Rot Moose browsing		
Explain forest certification and briefly describe the three most common certification systems in Canada	CSA, FSC, SFI		
Be able to use basic forest equipment, tables and forest type maps in order to measure tree diameter, height, age, volume and location etc. Summarize the history of a tree by looking at growth rings (periods of growth, faster	Diameter tape, increment borer, prism, clinometer, tree cookie, stocking charts, volume tables, compass, GPS		

growth, scarring etc.).		<a href="http://www.env.gov.nl.ca/env/env_protecti on/pesticides/forest.html">http://www.env.gov.nl.ca/env/env_protecti on/pesticides/forest.html</a>
Understand the difference between clear-cutting and deforestation. Explain why clear-cutting is the main harvesting method in NL		<b>Tree Growth and Physiology</b> <a href="http://www.envirothon.org/pdf/CG/tree_ph ysiology.pdf">http://www.envirothon.org/pdf/CG/tree_ph ysiology.pdf</a>
Examine current forestry issues from the perspectives of different user groups (forest companies, Department of Natural Resources, general public, recreational groups, tourist operator etc.)	Harvesting techniques, pesticide use, old growth forests, prescribed burns, protected areas etc.	<a href="http://www.butler.edu/herbarium/treeid/tr eeparts.html">http://www.butler.edu/herbarium/treeid/tr eeparts.html</a> <a href="http://www.cnr.vt.edu/dendro/forsite/Equi p.htm">http://www.cnr.vt.edu/dendro/forsite/Equi p.htm</a>  <b>Tree ID using decision key</b> <a href="http://dendro.cnre.vt.edu/dendrology/idit.h tm">http://dendro.cnre.vt.edu/dendrology/idit.h tm</a>
Be familiar with forestry safety equipment	Boots, first aid, safety glasses, chainsaw pants etc.	

<b>AQUATIC ECOLOGY LEARNING OBJECTIVE</b>	<b>TERMS AND CONCEPTS</b>	<b>USEFUL RESOURCES (not an exhaustive list)</b>
Describe the chemical and physical properties of water and explain their importance for freshwater and saltwater ecosystems	Bottom Substrate	<b>Water Properties</b> <a href="http://ga.water.usgs.gov/edu/waterproperties.html">http://ga.water.usgs.gov/edu/waterproperties.html</a>
Identify the processes and phases for each part of the water cycle	Hydrologic Cycle	<b>Hydrologic Cycle (water cycle)</b> <a href="http://earthguide.ucsd.edu/earthguide/diagrams/watercycle/inde x.html">http://earthguide.ucsd.edu/earthguide/diagrams/watercycle/inde x.html</a> <a href="http://ga.water.usgs.gov/edu/watercycle.html">http://ga.water.usgs.gov/edu/watercycle.html</a>
Discuss methods of conserving water and reducing point and non-point pollution		
Analyse the interaction of competing uses of water (hydropower, navigation, wildlife, recreation, waste assimilation, irrigation, industry etc.) and propose solutions for wise use of the resource		<b>Industrial Water Use / Activities</b> <a href="http://www.statcan.gc.ca/pub/16-401-x/2010001/aftertoc- aprestdm2-eng.htm">http://www.statcan.gc.ca/pub/16-401-x/2010001/aftertoc- aprestdm2-eng.htm</a>

Understand and describe the main components of aquatic habitats including fish (see below), plants and non-living elements (chemical and physical properties, geology)		<a href="http://www.dfo-mpo.gc.ca/science/enviro/habitat-eng.htm">http://www.dfo-mpo.gc.ca/science/enviro/habitat-eng.htm</a>
Identify common aquatic organisms through the use of a key	Groundfish, pelagics, invertebrates, diadromous, marine mammals, freshwater species	<b>Riparian Buffers/ Non-point source pollution prevention</b> <a href="http://www.riparianbuffers.umd.edu/slide.html">http://www.riparianbuffers.umd.edu/slide.html</a> <a href="http://www.soil.ncsu.edu/publications/BMPs/buffers.html">http://www.soil.ncsu.edu/publications/BMPs/buffers.html</a>
Deliniate the watershed boundary for a small water body and describe how characteristics of the watershed would affect management approaches		<b>Aquatic Ecosystems</b> <a href="http://www.fao.org/fishery/topic/2880/en">http://www.fao.org/fishery/topic/2880/en</a>
Explain the different types of aquifers and how each type relates to water quality and quantity		<b>Hydrology ( watersheds)</b> <a href="http://atlas.nrcan.gc.ca/site/english/maps/environment/hydrology/watershed/1">http://atlas.nrcan.gc.ca/site/english/maps/environment/hydrology/watershed/1</a>
Briefly describe the benefits of wetlands, both function and value	Bog, fen, marsh, swamp, pond	<b>Aquifers</b> <a href="http://ga.water.usgs.gov/edu/earthgwaquifer.html">http://ga.water.usgs.gov/edu/earthgwaquifer.html</a>
Understand the purpose of a stream buffer	Riparian buffer	<b>Oceans</b> <a href="http://www.dfo-mpo.gc.ca/oceans/oceans-eng.htm">http://www.dfo-mpo.gc.ca/oceans/oceans-eng.htm</a>
Describe how land use practices impact aquatic ecosystems		<b>Wetlands</b> <a href="http://atlas.nrcan.gc.ca/site/english/learningresources/theme_modules/wetlands/index.html">http://atlas.nrcan.gc.ca/site/english/learningresources/theme_modules/wetlands/index.html</a>
Describe the main commercial uses of aquatic/marine resources in NL	Aquaculture, Hydropower, fisheries (ocean, river), oil and gas, marine transportation etc.	<b>Water Quality</b> <a href="http://ec.gc.ca/eau-water/default.asp?lang=En&amp;n=F2F43FC7-1">http://ec.gc.ca/eau-water/default.asp?lang=En&amp;n=F2F43FC7-1</a>
Know methods used to assess and manage aquatic environments and use water quality information to assess the general water quality of a given body of water	Sampling techniques, water quality parameters (physical, chemical, biological), point and non-point source pollution	<b>Aquatic Species</b> <a href="http://www.dfo-mpo.gc.ca/science/publications/uww-msm/index-eng.asp?region=maritimes">http://www.dfo-mpo.gc.ca/science/publications/uww-msm/index-eng.asp?region=maritimes</a> <a href="http://www.env.gov.nl.ca/env/wildlife/all_species/animals/inland_fish/index.html">http://www.env.gov.nl.ca/env/wildlife/all_species/animals/inland_fish/index.html</a> <a href="http://www.nfl.dfo-mpo.gc.ca/e0007140">http://www.nfl.dfo-mpo.gc.ca/e0007140</a>
Understand why marine environments are important and describe methods to maintain or improve them.		
Be familiar with the laws and methods used to protect water quality (surface, ground) and aquatic environments and use this information to make management decisions to improve the quality of water or aquatic environment in a given situation		<b>Aquatic Impact Prevention</b> <a href="http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/policies-politique/index_e.asp">http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/policies-politique/index_e.asp</a>
Identify the main species of freshwater fish found in		

Newfoundland and be familiar with some aquatic species at risk on the island		<b>Brook Trout</b> <a href="http://www.denniskalma.com/brooktrout.html">http://www.denniskalma.com/brooktrout.html</a>
Identify the main species of freshwater fish found in Labrador and be familiar with some aquatic species at risk in Labrador		<b>Fish Anatomy</b> <a href="http://fish.mongabay.com/anatomy.htm">http://fish.mongabay.com/anatomy.htm</a>
Understand and describe the life cycle of the main freshwater fish found in NL		<a href="http://dive.bc.ca/basic_fish_anatomy.html">http://dive.bc.ca/basic_fish_anatomy.html</a> <a href="http://www.biologycorner.com/worksheets/fishcolor.html">http://www.biologycorner.com/worksheets/fishcolor.html</a> <a href="http://www.iowas.co.uk/fish%20anatomy.html">http://www.iowas.co.uk/fish%20anatomy.html</a>
Understand basic fish anatomy and the importance of body shape, mouth shape, fins and gills	Mouth shape, barbells, fins (barbells, caudal, anal, pelvic, pectoral, dorsal), scales, gills, lateral line, swim bladder	<b>All inclusive aquatic information</b> <a href="http://www.ec.gc.ca/WATER/en/manage/effic/e_weff.htm">http://www.ec.gc.ca/WATER/en/manage/effic/e_weff.htm</a> <a href="http://www.aquatic.uoguelph.ca/index.htm">http://www.aquatic.uoguelph.ca/index.htm</a>

<b>SOILS/LAND USE LEARNING OBJECTIVE</b>	<b>TERMS AND CONCEPTS</b>	<b>TOOLS</b>	<b>USEFUL RESOURCES (not an exhaustive list)</b>
What is soil? What are the main components of soil?	Humus, Soil Ped, Colloid, cation, clay, silt, sand, loam, peat, chalk, podzol		<b>Soil Profile/ Soil Formation</b> <a href="http://www.realtrees4kids.org/ninetwelve/soil.htm">http://www.realtrees4kids.org/ninetwelve/soil.htm</a>
Recognize soil as an important resource.			<a href="http://soilweb.landfood.ubc.ca/landscape/parent-material/glacial-environment/glacio-fluvial">http://soilweb.landfood.ubc.ca/landscape/parent-material/glacial-environment/glacio-fluvial</a>
Gain a level of understanding of the main factors that influence soil development	Climate, parent material, topography, organisms (including humans), and time.		<b>Glossary of Terms</b> <a href="http://sis.agr.gc.ca/cansis/glossary/">http://sis.agr.gc.ca/cansis/glossary/</a> <a href="http://animalrangeextension.montana.edu/LoL/Module-2/2-Glossary.htm">http://animalrangeextension.montana.edu/LoL/Module-2/2-Glossary.htm</a>
What is parent material?	Know the main parent material types		<b>Parent Material</b> <a href="http://sis.agr.gc.ca/cansis/taxa/genesis/pmdep/atlantic.html">http://sis.agr.gc.ca/cansis/taxa/genesis/pmdep/atlantic.html</a> <a href="http://soilweb.landfood.ubc.ca/landscape/parent-material/glacial-environment/glacio-fluvial">http://soilweb.landfood.ubc.ca/landscape/parent-material/glacial-environment/glacio-fluvial</a>
Understand soil formation processes.	Weathering, illuviation, eluviation, organic matter enrichment, gleying.		
Understand terms used to describe soils and soil properties Be able to identify and describe these soil properties in soil from a pit	Horizon, texture, colour, structure, consistence, permeability, porosity, bulk density, pH, mottles, gleying	Munsell Color Chart, Measuring Tape	

Understand soil water and factors that affect its movement, storage and availability for plants.	Water table, aquifer, hard water, soft water		<p><b>Origin of NL Flora</b>  <a href="http://www.mun.ca/botgarden/plant_bio/">http://www.mun.ca/botgarden/plant_bio/</a></p> <p><b>How to take a soil sample</b>  <a href="http://www.nr.gov.nl.ca/nr/agrifoods/land_resources/soils/soilanalysis.pdf">http://www.nr.gov.nl.ca/nr/agrifoods/land_resources/soils/soilanalysis.pdf</a></p> <p><b>Soil Erosion</b>  <a href="http://soilerosion.net/">http://soilerosion.net/</a>  <a href="http://www.omafra.gov.on.ca/english/engineer/facts/87-040.htm">http://www.omafra.gov.on.ca/english/engineer/facts/87-040.htm</a>  <a href="https://www.msu.edu/user/dunnjef1/rd491/soile.htm">https://www.msu.edu/user/dunnjef1/rd491/soile.htm</a></p> <p><b>Reducing Erosion and Runoff</b>  <a href="http://www.ext.vt.edu/pubs/envirohort/426-722/426-722.html">http://www.ext.vt.edu/pubs/envirohort/426-722/426-722.html</a></p> <p><b>Nutrient Cycling in Soil</b>  <a href="http://www.nsac.ns.ca/pas/staff/cmi/cs320nut.htm">http://www.nsac.ns.ca/pas/staff/cmi/cs320nut.htm</a></p> <p><b>Boreal Forest</b>  <a href="http://www.borealforest.org/index.php?category=world_boreal_forest&amp;page=overview">http://www.borealforest.org/index.php?category=world_boreal_forest&amp;page=overview</a>  <a href="http://atlas.nrcan.gc.ca/site/english/learningresources/theme_modules/borealforest/index.html">http://atlas.nrcan.gc.ca/site/english/learningresources/theme_modules/borealforest/index.html</a></p> <p><b>Water Movement in Soils</b>  <a href="http://soils.usda.gov/education/resources/videos/water_movement.html">http://soils.usda.gov/education/resources/videos/water_movement.html</a></p> <p><b>Educational video on Soils (watch</b></p>
Understand soil drainage classes and the soil/site features that can be used to assess drainage class.			
Understand the role of soils in maintaining or enhancing water quality.			
Explain the role of soil in the hydrological, nutrient and oxygen cycles			
Understand the nature of plant nutrients and how they are made available in soil.	Mineralization		
Understand the role of soil microbes and the process of decomposition in a healthy soil ecosystem.			
Recognize some general characteristics and distinguishing features of wetland soils, forest soils, agriculture soils, and urban soils.			
Describe and explain the process of peat formation			
Appreciate the concept of matching land use to soil type.			
Gain a level of understanding of the ways soils can be damaged	Erosion, compaction, organic matter loss, nutrient depletion, salinization, pollution, acidification		
Understand some of the ways soil damage can be avoided or reduced	Best management practices, cultivation patterns, buffer zones, fertilization, incorporation of organic material, limited cultivation		
Understand how to use soil survey reports to glean information on different soils and their sustainability for different uses.	Soil reports, soils map		
Identify types of soil erosion and discuss methods for reducing erosion.			
Understand boreal forest soil types and the main soil type/s found in Newfoundland and Labrador			

Identify the major land based industries in NL and how these are affected by the soil.	Forestry, Mining, Agriculture	<p><b>“Soil Stories” video)</b>  <a href="http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/soils">http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/soils</a></p> <p><b>Soil Reports and Maps</b>  <a href="http://www.nr.gov.nl.ca/nr/agrifoods/maps/index.html">http://www.nr.gov.nl.ca/nr/agrifoods/maps/index.html</a></p>
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<b>WILDLIFE LEARNING OBJECTIVE</b>	<b>TERMS AND CONCEPTS</b>	<b>USEFUL RESOURCES (not an exhaustive list)</b>
Define wildlife.	Wildlife	<p><b>Mammals ( native and introduced)</b>  <a href="http://www.env.gov.nl.ca/env/snp/programs/education/animal_facts/mammals/index.html">http://www.env.gov.nl.ca/env/snp/programs/education/animal_facts/mammals/index.html</a></p> <p><b>Species status</b>  <a href="http://www.cosewic.gc.ca/eng/sct1/index_e.cfm">http://www.cosewic.gc.ca/eng/sct1/index_e.cfm</a></p>
Identify common species and signs of wildlife of Newfoundland & Labrador (keys will be used for more extensive identification).	Common animal signs include: Scat, tracks, sounds, patterns on trees, nests, fur, feathers	<p><b>Hunting and wildlife concepts</b>  <a href="http://homestudy.ihea.com/wildlife/10surplus.htm">http://homestudy.ihea.com/wildlife/10surplus.htm</a>  <a href="http://www.env.gov.nl.ca/env/wildlife/hunting/index.html">http://www.env.gov.nl.ca/env/wildlife/hunting/index.html</a></p>
Identify native and non-native mammals in Newfoundland		
Identify native and non-native mammals in Labrador		<p><b>Predator/prey relationship</b>  <a href="http://www.biology-online.org/dictionary/Predator-prey_relationship">http://www.biology-online.org/dictionary/Predator-prey_relationship</a>  <a href="http://www.globalchange.umich.edu/globalchange1/current/lectures/predation/predation.html">http://www.globalchange.umich.edu/globalchange1/current/lectures/predation/predation.html</a></p>
Understand habitat types and associated wildlife, explaining how each habitat is suited to the needs of the species found in that habitat	Habitat, wetlands, riparian	
Describe specific adaptations of wildlife to their environment and role in the ecosystem.	Ecosystem, hibernation, migration, climax community	<p><b>Non-native species/ Invasive species</b>  <a href="http://www.envroliteracy.org/article.php/40.html">http://www.envroliteracy.org/article.php/40.html</a></p>

Describe predator/prey relationships and examples.	Predator, prey, herbivore, carnivore, omnivore, succession	<a href="http://www.ec.gc.ca/eee-ias/Default.asp?lang=En">http://www.ec.gc.ca/eee-ias/Default.asp?lang=En</a>
Describe the potential impact of the introduction of non-native species.	Native species, non-native species	<b>Carrying Capacity</b> <a href="http://www.gov.mb.ca/conservation/sustain/carcap.pdf">http://www.gov.mb.ca/conservation/sustain/carcap.pdf</a>
Describe the major factors affecting threatened and endangered species, and methods used to improve the populations of these species.	Threatened species, endangered species, wilderness and ecological reserves, no hunt zones	<b>Food Chain / Bioaccumulation</b> <a href="http://www.ecokids.ca/pub/eco_info/topics/frogs/chain_reaction/index.cfm">http://www.ecokids.ca/pub/eco_info/topics/frogs/chain_reaction/index.cfm</a> <a href="http://www.enchantedlearning.com/subjects/foodchain/">http://www.enchantedlearning.com/subjects/foodchain/</a>
Identify some rare, threatened and endangered species (terrestrial and aquatic) in NL as listed by the Committee on the Status of Endangered Wildlife in Canada	Terrestrial species, aquatic species, COSEWIC	<b>Food Web</b> <a href="http://www.eoearth.org/article/Food_web">http://www.eoearth.org/article/Food_web</a>
Describe ways habitat can be improved for specific species by knowing their requirements.		<b>Species richness</b> <a href="http://www.eoearth.org/article/Species_richness?topic=58074">http://www.eoearth.org/article/Species_richness?topic=58074</a>
Discuss the concepts of carrying capacity and limiting factors.	Carrying capacity	
Understand the impact that non-native species (plants, mammals, amphibians, birds and insects) have had on our ecosystems and on other wildlife species	Predator - control	<b>Endangered Species Act</b> <a href="http://www.releases.gov.nl.ca/releases/2002/tcr/0809n02.htm">http://www.releases.gov.nl.ca/releases/2002/tcr/0809n02.htm</a>
Describe the food chains/webs and cite examples.	Food chain, food web	<b>Wildlife Management</b> <a href="http://www.env.gov.nl.ca/env/publications/wildlife/9d348899d01.pdf">http://www.env.gov.nl.ca/env/publications/wildlife/9d348899d01.pdf</a>
Describe factors that limit or enhance population growth.	Population Density	
Define species richness	Species Richness	
Discuss various ways the public and wildlife managers can help in the protection, conservation, management, and enhancement of wildlife populations.	Canada Wildlife Act, Wildlife Act (provincial)	
Discuss conservation and management issues, including regulation of hunting and fishing, habitat protection and provincial, federal and non-government groups that protect wildlife resources.		Wild Species 2005 CD - sent to all Envirothon teams

Understand the role of hunting in wildlife management in NL		
Understand that wildlife species are an important component of biodiversity	Biodiversity	
Discuss issues surrounding the conservation of Species at Risk.		
Describe the levels of protection for Species at Risk under the Endangered Species Act.		
Many of the species in Newfoundland and Labrador are at the northern, southern and eastern edge of their range. Explain what this means and describe the challenges this places on wildlife managers		

<b>Non-point Source Pollution/Low Impact Development - <u>Learning Objectives</u></b>		<b>Terms &amp; Concepts</b>	<b>USEFUL RESOURCES (not an exhaustive list)</b>
1	Define Low Impact Development (LID).		<a href="http://www.envirothon.org/current-competition.html">http://www.envirothon.org/current-competition.html</a>
2	Define nonpoint source pollution.		<a href="http://www.envirothon.org/pdf/2012/01_fact_sheet_1.pdf">http://www.envirothon.org/pdf/2012/01_fact_sheet_1.pdf</a> <a href="http://www.envirothon.org/pdf/2012/02_fact_sheet_2.pdf">http://www.envirothon.org/pdf/2012/02_fact_sheet_2.pdf</a>
3	Explain the impacts of land use on watersheds.		<a href="http://www.envirothon.org/pdf/2012/03_EPA_reducing_stormwater_costs.pdf">http://www.envirothon.org/pdf/2012/03_EPA_reducing_stormwater_costs.pdf</a> <a href="http://www.envirothon.org/pdf/2012/04_EPA_green_infrastructure.pdf">http://www.envirothon.org/pdf/2012/04_EPA_green_infrastructure.pdf</a>

4	Understand the limitations and benefits of conventional stormwater management design versus LID.		<a href="http://www.envirothon.org/pdf/2012/05_EPA_roofcover.pdf">http://www.envirothon.org/pdf/2012/05_EPA_roofcover.pdf</a>
5	Identify and apply LID Best Management Practices (BMPs) and selection criteria.		<a href="http://www.envirothon.org/pdf/2012/06_LID_q_and_a.pdf">http://www.envirothon.org/pdf/2012/06_LID_q_and_a.pdf</a>
6	Explain how soils, wildlife, forestry, and aquatics affect and are affected by nonpoint source pollution (and its reduction) and LID.		<a href="http://www.envirothon.org/pdf/2012/07_LID_literature_review.pdf">http://www.envirothon.org/pdf/2012/07_LID_literature_review.pdf</a>
7	Identify how LID is used to manage stormwater.		<a href="http://www.envirothon.org/pdf/2012/08_LID_big_box_retailers.pdf">http://www.envirothon.org/pdf/2012/08_LID_big_box_retailers.pdf</a>
8	Explain the impacts urban sprawl has on nonpoint source pollution and how LID can be used to manage and reduce nonpoint source pollution.		<a href="http://www.envirothon.org/pdf/2012/09_NRDC_stormwater_strategies.pdf">http://www.envirothon.org/pdf/2012/09_NRDC_stormwater_strategies.pdf</a>
9	Analyze pros and cons of the application of LID Best Management Practices.		<a href="http://www.envirothon.org/pdf/2012/10_SWMPC_LID_NEWS_1.pdf">http://www.envirothon.org/pdf/2012/10_SWMPC_LID_NEWS_1.pdf</a>
10	Understand the relationship between LID hydrologic controls (i.e. retention ponds, swales, etc.) and water quality benefits.		<a href="http://www.envirothon.org/pdf/2012/11_SWMPC_LID_NEWS_2.pdf">http://www.envirothon.org/pdf/2012/11_SWMPC_LID_NEWS_2.pdf</a>
			<a href="http://www.envirothon.org/pdf/2012/12_SWMPC_LID_NEWS_3.pdf">http://www.envirothon.org/pdf/2012/12_SWMPC_LID_NEWS_3.pdf</a>
			<a href="http://www.envirothon.org/pdf/2012/13_SWMPC_LID_NEWS_4.pdf">http://www.envirothon.org/pdf/2012/13_SWMPC_LID_NEWS_4.pdf</a>
			<a href="http://www.envirothon.org/pdf/2012/14_SWMPC_LID_NEWS_5.pdf">http://www.envirothon.org/pdf/2012/14_SWMPC_LID_NEWS_5.pdf</a>
			<b>Alberta Low Impact Development Partnership</b> - <a href="http://alidp.org/">http://alidp.org/</a>
			<b>British Columbia – Capital Regional District – LID resources</b> - <a href="http://www.crd.bc.ca/watersheds/lid/index.htm">http://www.crd.bc.ca/watersheds/lid/index.htm</a>
			<b>More resources from British Columbia</b> - <a href="http://www.waterbucket.ca/">http://www.waterbucket.ca/</a>
			<b>Great videos from Montgomery County Pennsylvania</b> - <a href="http://www2.montcopa.org/planning/cwp/view.asp?a=1675&amp;q=65899">http://www2.montcopa.org/planning/cwp/view.asp?a=1675&amp;q=65899</a>
			<b>Conservation and Subdivision Planning</b>
			<a href="http://www.nbeia.nb.ca/pdf/Sustainable%20Community%20Design%20for%20Subdivisions.pdf">http://www.nbeia.nb.ca/pdf/Sustainable%20Community%20Design%20for%20Subdivisions.pdf</a>

11	Provide examples of what individuals and communities can do to implement LID at home.		
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