

# Environmental Science 3205

## Outcomes

### Unit 1: Introduction to Environmental Science 3205

- 1.01 Define biosphere, geosphere, atmosphere, and hydrosphere, and Identify that humans are one part of a complex system of living thing that can have a great impact on the other systems
- 1.03 Describe the Newfoundland and Labrador transition, from aboriginals, European settlers, to present day, in terms of how they impacted the land and used resources
- 1.04 Describe environmental science. Include: (i) the science disciplines involved, (ii) social disciplines involved, (iii) levels of government involved
- 1.05 Recognize common misconceptions about science. Include: (i) science can solve all problems, (ii) scientific knowledge is fact, (iii) science is done for noble causes, (iv) there is one scientific method, (v) science is not influenced by society
- 1.06 Describe some applications of Environmental Science. Include: (i) environmental impact assessments (ii) environmental monitoring, (iii) risk assessment, (iv) decision making and policy development
- 1.07 Identify that anthropocentric attitudes have contributed to many of today's environmental issues
- 1.08 Identify the relationship between human population growth, demand for resources, and increased consumerism
- 1.09 Define sustainability in terms of resource use and ecosystem health.
- 1.10 Outline how balance is maintained in ecosystems. Include: (i) energy transfer (food chains/webs, , pyramids), (ii) nutrient cycling
- 1.11 Define environmental conservation, stewardship in relation to sustainability
- 1.13 Identify the factors that influence sustainability. Include: (i) ecological, (ii) social, (iii) economic
- 1.14 Define precautionary principle
- 1.15 Recognize the role of legislation in guiding stewardship and sustainability
- 1.16 Recognize that environmental monitoring is an essential component of sustainability
- 1.17 Recognize some widely-held misconceptions related to sustainability. Include: (i) environment damage is permanent, (ii) forest fires are bad, (iii) one person cannot make a difference, (iv) science can solve all of our problems, (v) practicing the four R's is difficult , (vi) all human activity in nature is bad

- 1.18 Identify individual impacts on the environment using the concept of ecological footprint
- 1.19 Describe your community's impact on the environment
- 1.20 Describe environmental responsibility. Include the role of: (i) individuals, (ii) community , (iii) industry , (iv) government
- 1.21 Define eco-citizenship. Include: (i) knowledge, (ii) attitude , (iii) practice. Identify examples of eco-citizenship at different levels.. Includes: (i) household, (ii) community, (iii) provincial
- 1.23 Identify the conflict that may exist between eco-citizenship and economic realities
- 1.24 Recognize that Newfoundland and Labrador has a variety of eco-regions and ecosystems
- 1.25 Define biodiversity in ecosystems, including  
species diversity and  
genetic diversity
- 1.27 Describe the importance of species diversity and genetic diversity in an ecosystem.
- 1.28 Identify reasons why some organisms become species at risk
- 1.29 Recognize the importance of protecting species
- 1.30 Distinguish between natural extinctions and anthropogenic extinctions
- 1.31 Describe the impacts of introduced species
- 1.32 Describe the process of classifying an organism as a species at risk. Include: (i) species assessment, (ii) COSEWIC's recommendation, (iii) government action/inaction
- 1.33 Identify the COSEWIC listings that categorize species at risk. Include (i) not at risk, (ii) data deficient, (iii) special concern, (iv) threatened, (v) endangered , (vi) extirpated, (vii) extinct
- 1.34 Describe the recovery process of a species at risk. Include: (i) research, (ii) monitoring, (iii) stewardship, (iv) education, (v) socio-economic, (vi) recovery teams
- 1.35 Define protected area
- 1.36 Identify types of protected areas in Newfoundland and Labrador. Include: parks and reserves. Explain their benefits and how they are created.

