

What Do You Remember?

- In your notebook, write the word(s) needed to complete each of the following sentences. **K/U**
 - Ecosystem _____ refers to the many benefits that we receive from ecosystems. (3.1)
 - The changes following events such as forest fires are called _____ succession. (3.2)
 - Tropical _____ exhibit the highest biodiversity of any ecosystem. (3.3)
 - The Committee on the Status of Endangered Wildlife in Canada monitors all species that are at _____. (3.3)
 - _____ occurs when a single large and continuous natural area is separated into smaller patches. (3.4)
 - Most _____ loss in Canada occurred during the nineteenth and early twentieth centuries. (3.4)
 - When non-native species are able to outcompete native species, they may become _____. (3.5)
- Match the term on the left with the appropriate definition on the right. (3.3) **K/U**

(a) extinct	(i) a species that may become threatened or endangered
(b) extirpated	(ii) a species facing imminent extinction or extirpation
(c) endangered	(iii) a species that no longer exists
(d) threatened	(iv) a species that no longer lives in a particular region
(e) special concern	(v) a species likely to become endangered if factors do not change
- Which type of ecosystem has the greatest biodiversity?
 - Where are these ecosystems located? (3.3) **K/U**
- Describe some of the ecological impacts of
 - acid precipitation on aquatic ecosystems
 - acid precipitation on terrestrial ecosystems
 - oil spills in marine ecosystems
 - plastic waste that enters the oceans (3.6) **K/U**

- Briefly describe four techniques used to help clean up oil spills. (3.6) **K/U**

What Do You Understand?

- Classify each of the following as an ecosystem cultural service, a product, or another service. (3.1) **K/U T/I**

(a) cross-country skiing trail	(e) wilderness canoe routes
(b) wood and paper products	(f) groundwater
(c) clean air	(g) seafood
(d) medicinal compounds	
- Match the human activity on the left with the possible ecological impact on the right. (3.4, 3.6) **K/U**

(a) removing coastal vegetation	(i) loss of species dependent on aquatic ecosystems
(b) commercial trawler fishing	(ii) sediments in runoff smother natural habitats
(c) wetland drainage	(iii) increased acid precipitation
(d) clearing of land next to rivers	(iv) damage to ocean-bottom ecosystems
(e) release of sulfur oxides	(v) increased erosion and loss of turtle nesting sites
- Plastic pollution is a major global concern. (3.6) **K/U T/I**
 - List all the plastic items you have used today.
 - Classify each of these items under the following headings: often reused, usually recycled, placed in the garbage, discarded as litter.
- In many ways, garbage is an invention of the modern world. Explain why Aboriginal peoples did not have problems similar to our modern waste management issues. (3.6) **A**
- Describe the status of the loggerhead shrike. Why is this species at risk? (3.4) **K/U**
- Habitat loss is not as rapid in Ontario as it once was. Does this mean that people living in Ontario no longer play a major role in habitat loss? (3.4) **K/U**
- Describe the three main ways of controlling invasive species. (3.5) **K/U**

Solve a Problem

13. Examine the two simplified food webs in Figure 1. Since the arrival of Europeans, all of the cougars and elk and most of the wolves that once lived throughout southern Ontario are gone. (3.5) **K/U T/I A C**
- List differences in the two food webs.
 - What impacts do you think these changes had on the remaining species?
 - Is it surprising that some regions of Ontario are experiencing overpopulation problems with white-tailed deer and beaver? Explain.
 - Lyme disease is spread by wood ticks that feed on white-tailed deer. Predict how these changes might influence the spread of Lyme disease.

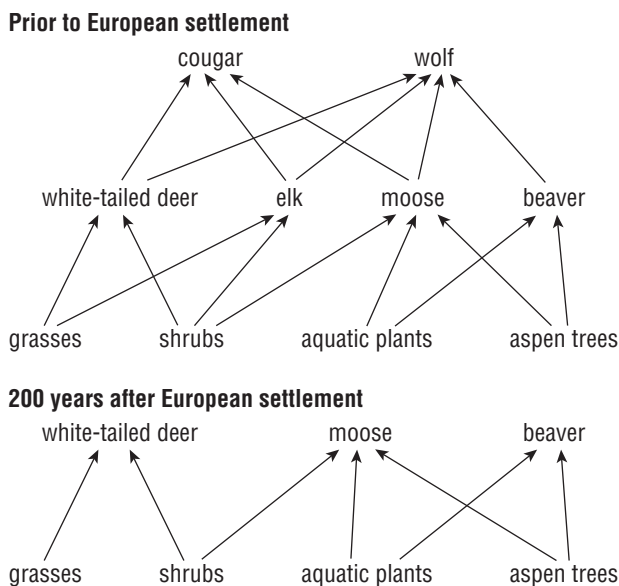


Figure 1

Create and Evaluate

- Some people hunt and fish as a form of recreation. Should hunting and fishing be allowed? Should there be different rules for those who hunt and fish for food compared with those who do so for sport? Explain your answers. (3.7) **A C**
- Snowmobiling, power-boating, and even driving to the cottage contribute to air pollution. Is this okay? Do you think people should be allowed to pollute in order to enjoy nature? (3.7) **A C**
- Wilderness park policies often state that any naturally occurring fires are to be allowed to burn without interference. This can result in the loss of large areas of prized parkland. Do you think it is wise to let fires burn naturally inside park boundaries? Why or why not? (3.7) **A C**

Reflect on Your Learning

- In this chapter, you learned that large numbers of species are considered to be at risk in Ontario. (3.3) **T/I C**
 - Before reading this chapter, how many at-risk species were you familiar with?
 - How could you find out more about plants and animals that are at risk in your region of the province?
- How might the information you learned in this chapter influence your behaviour? **A**

Web Connections



- The Galápagos Islands are home to some of the most amazing species on Earth and attract large numbers of tourists. The Galápagos Islands have also suffered from the introduction of many invasive species. Research the current status of these islands and report on the following: (3.5) **T/I**
 - What makes these islands so unique?
 - How is the impact of tourism controlled in the Galápagos?
 - What invasive species are of greatest concern?
- Select one Canadian ecological issue discussed in this chapter. Research what Canadian organizations are involved in this issue. Look for one government agency, one non-governmental organization, and one environmental group that includes high school-aged students. **T/I A C**
 - What are the organizations?
 - What actions or projects have they been involved with?
 - What have they accomplished? How have their actions benefited the environment?



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