

**Time**

60–90 min

**Skills and Processes**

The Chapter Review provides an opportunity for students to demonstrate their understanding of and their ability to apply the key ideas, vocabulary, and skills and processes.

**Program Resources**

BLM 0.0-9 Chapter Key Ideas  
BLM 3.0 Chapter 3 Quiz  
Rubric 14: Research  
Nelson Science Probe 7  
Web site  
[www.science.nelson.com](http://www.science.nelson.com)

**Key Ideas Summary**

- Use the Key Ideas Summary to review what has been learned. After reading each key idea, have students work with partners to discuss what they remember about the topic. Students will then use the section number references in the chart to scan for additional information in the student book.
- Paraphrasing—putting information into your own words—is an important way of checking for understanding. Model paraphrasing with the class, and then ask students to work with a partner to paraphrase each of the key ideas. Encourage students to use the related vocabulary as they are paraphrasing.
- Ask students to write each key idea in their notebook, or use *BLM 0.0-9 Chapter Key Ideas*. Beside each key idea, ask them to create labelled diagrams or sketches using the vocabulary words to illustrate the idea.
- Have students complete *BLM 3.0 Chapter 3 Quiz* to review the vocabulary and concepts presented in the chapter.

**Review Key Ideas and Vocabulary—Suggested Answers**

1. Biodiversity is important in an ecosystem because it makes the ecosystem sustainable.
2. A sustainable environment is one that can keep up with the amount of resources we take out or use, and handle the waste that we put into it. It is human use that usually determines whether or not an ecosystem is sustainable. Indigenous knowledge can help us achieve sustainability by paying attention to knowledge of local ecosystems that has been passed on for many generations.
3. Answers will vary according to local ecosystems, but may be examples of
  - introducing non-native plants and animals
  - water, land, or air pollution
  - habitat loss due to shopping mall, housing, industrial, or agricultural development or use
4. Humans can work to have a positive impact on ecosystems by preserving, conserving, and restoring. When humans set aside land and keep it safe from destruction, they preserve. Humans conserve when they use the land wisely and in a way that maintains biodiversity. Humans restore when they help repair damage to ecosystems, usually caused by human activities. All of these are examples of stewardship.

5. An ecological footprint is how much of Earth's resources you use up and how much waste you produce with your lifestyle. Its size matters because some people, like Canadians, are using more of Earth than there is to go around for all the people in the world.

### Use What You've Learned—Suggested Answers

6. Sample answer: Building our school and schoolyard resulted in habitat loss because areas where shrubs, grasses, and trees grew were paved over for the building and the parking lot. Animals no longer come to this area to feed or rest on those plants. The playground equipment also takes up space where different plants used to grow.
7. Answers will vary. Here is a sample descriptive paragraph:  
I feel so wilted. When I first heard the loud, scraping sound, I was afraid it would be a mower. But it was worse. My roots have been dug out of the ground, and now I am squished together in a heap with some other plants that I do not know. They have been torn out by their roots or dug up with a shovel. I cannot see any of my regular neighbours, and I no longer see the insects crawling around my stem, looking for shelter. And I notice that I am not just wilted, I am terribly thirsty. It is getting warmer in this pile, and I notice that some of us are starting to rot. It looks like another paved parking lot is being made—not even a hope for my seeds that fell to the ground last week!
8. People felt that a grizzly bear sanctuary was needed in the Khutzeymateen Valley because it has one of the densest grizzly bear populations. It is regarded as excellent habitat, as only a small portion had been logged in the mid-1900s.

Other sanctuaries and reserves that students choose to research will vary according to their interests.

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9. The David Suzuki Foundation suggests eating meat-free meals one day a week to conserve habitat. What is being conserved is the land or habitat required to graze the animals or grow their feed. If you think of it in terms of energy, we can eat soy beans, lentils, beans, or nuts, making our eating one step lower on the food chain. This would conserve the overall energy required to feed us.
10. Cartoons of the suggested situations may include these details:
  - a) A red-eared slider in a pond, eating plants and insects; other turtles looking hungry.
  - b) Mink eating large quantities of prey, such as small mammals, rodents, frogs, fish, crayfish, birds, eggs, insects, and worms. The cartoon may indicate reduced populations of small animals, or other predators going hungry. (Farmed mink can quickly return to being efficient predators.)

- c) A pet cat killing songbirds or snakes, and signs that the populations of these animals are affected. Or a cat killing mice and picking up a disease, which can be spread to other cats.
11. Abalone stocks are low because of earlier over-harvesting and continued pressure by poachers. The northern abalone grows slowly, matures slowly, is sedentary, and reproduces infrequently. Mature abalone tend to accumulate in shallow water, where poachers easily gather them. Abalone stocks are still not recovering.



### **Think Critically—Suggested Answers**

12. Pollution refers to things not normally found in the environment, or things that are present in such large amounts that they overwhelm the natural cycles in an ecosystem. So, most natural things do not pollute. Non-native species can be considered a form of pollution, but humans usually transport them to their new home. Humans farm animals that pollute our ecosystems.
13. Answers will vary. A good choice would be the David Suzuki Foundation, as students have read about it in the student book. Students can use the phone book to contact local or regional organizations. Brochures and information may be available from regional districts, libraries, naturalist clubs, or the Internet. Some names to look at are the Sierra Club's BC chapter, BC Federation of Wildlife, Ducks Unlimited, Raincoast Society, Wild Bird Trust of BC, and Raincoast Conservation Society.
14. The average ecological footprint of a Canadian is larger than that of someone in a less-developed country. People in less-developed countries have less money than Canadians, and therefore buy and use fewer items. This uses fewer resources and produces less waste.

### **Reflect on Your Learning—Suggested Answers**

15. Students' responses will vary, but may contain some of the following ideas: paying closer attention to indigenous knowledge, choosing not to pollute, finding ways to reduce garbage, thinking about how to increase stewardship of a local ecosystem, helping others with restoration work, supporting conservation or preservation efforts with letter writing or advertising, or finding ways to reduce their ecological footprint.
16. Answers will depend on students' interests.