# Conserving Diversity **M3.1**

## *TIME*
720 minutes

## *OVERVIEW*
Students experience the diversity found in the environment of Manitoba by investigating the snakes of Narcisse and the tall grass prairie. By viewing videos, taking actual or virtual field trips, and collaborating in the inquiry process, students develop an understanding of these Manitoba features and a realization of the importance of conserving the diversity of the environment. Students work together to create a class wiki to share their learning.

## *SPECIFIC LEARNING OUTCOMES AND LITERACY WITH ICT CONTINUUM DESCRIPTORS*
Think about the intent of this learning experience (LE) and how you will facilitate instruction and assessment to meet your students' learning needs.
- What do your students need to know, be able to do, think, and feel at the end of this LE?
- What specific learning outcomes (SLOs) will guide instruction, learning, and assessment through this LE?

During instruction and assessment, students build understanding of interdisciplinary content through English language arts (ELA) and literacy with ICT. Therefore, target the SLOs in ELA and the descriptors in the Literacy with ICT Continuum that reflect your students' learning needs at this time of the year. Target two or three SLOs from each of the other subject areas for instruction and assessment. While additional SLOs will be uncovered and demonstrated, they may not be the focus of assessment. The targeted SLOs, descriptors, and criteria for observation can then be copied to the Focused Observation Form available online at <www.edu.gov.mb.ca/k12/cur/multilevel/blm/blm_5.doc>.

**English Language Arts**
- 2.1.3 *Textual Cues*—Use textual cues [such as headings and subheadings, story elements, key ideas in exposition . . .] to construct and confirm meaning.
- 3.1.1 *Use Personal Knowledge*—Categorize personal knowledge of a topic to determine information needs.
- 3.1.2 *Ask Questions*—Ask general and specific questions on topics using predetermined categories.
- 3.1.3 *Contribute to Group Inquiry*—Identify relevant personal knowledge of a topic and possible categories of questions and purposes for group inquiry or research.
- 3.1.4 *Create and Follow a Plan*—Select and use a plan for gathering information.
- 3.2.2 *Identify Sources*—Answer inquiry or research questions using a variety of information sources [such as classroom materials, school libraries, video programs, Dene/Inuit hunts . . .].
- 3.2.3 *Assess Sources*—Assess the usefulness of information for inquiry or research using pre-established criteria.
- 3.2.4 *Access Information*—Use a variety of tools [including indices, maps, atlases, charts, glossaries, typographical features, card or electronic catalogues, and dictionaries] to access information and ideas; use visual and auditory cues to identify important information.
- 3.3.2 *Record Information*—Make notes of key words, phrases, and images by subtopics; cite authors and titles of sources alphabetically.

- 3.3.3 *Evaluate Information*—Examine collected information to identify categories or aspects of a topic that need more information.
- 3.3.4 *Develop New Understanding*—Use gathered information and questions to review and add to knowledge; consider new questions regarding the inquiry or research process and content.
- 4.2.1 *Appraise Own and Others' Work*—Share own stories and creations in various ways with peers; give support and offer feedback to peers using pre-established criteria when responding to own and others' creations.
- 4.2.2 *Revise Content*—Revise to create an interesting impression and check for sequence of ideas.
- 4.4.3 *Attentive Listening and Viewing*—Demonstrate appropriate audience behaviours [such as listening to opposing opinions, disagreeing respectfully, expressing opinions . . .].
- 5.1.3 *Appreciate Diversity*—Connect the insights of individuals in oral, literary, and media texts to personal experiences; discuss connections in representations of cultures in oral, literary, and media texts; discuss personal participation and responsibility in communities.
- 5.2.1 *Cooperate with Others*—Appreciate that everyone in a group has to work together to achieve cooperative and collaborative group tasks, and act accordingly.
- 5.2.2 *Work in Groups*—Take roles and share responsibilities as a group member.

**Science**
- 4-1-07 Investigate and describe a variety of local and regional habitats and their associated populations of plants and animals.
- 4-1-09 Recognize that plant and animal populations interact within a community.
- 4-1-13 Predict, based on their investigations, how the removal of a plant or animal population may affect the rest of the community.
  *Examples: if the wolves were removed from a community, the deer population may increase rapidly . . .*
- 4-1-14 Investigate natural and human-caused changes to habitats, and identify resulting effects on plant and animal populations.
  Include: endangerment, extinction.
- 4-1-15 Describe how their actions can help conserve plant and animal populations and their habitats.
  *Examples: clean up a local stream to improve fish and bird habitat . . .*
- 4-1-16 Describe how specific technological developments have enabled humans to increase their knowledge about plant and animal populations.
  *Examples: radio collar tracking, time-lapse photography . . .*

**Social Studies**
- 4-KL-023 Identify issues related to environmental stewardship and sustainability in Manitoba.
- 4-VL-006 Appreciate Manitoba's natural environment.
- 4-VL-006A Respect their spiritual connection to the natural environment (land, water, sky).
- 4-S-100 Collaborate with others to share ideas, decisions, and responsibilities in groups.
- 4-S-103 Make decisions that reflect care, concern, and responsibility for the environment.
- 4-S-104 Negotiate constructively with others to build consensus.
- 4-S-201 Organize and record information in a variety of formats and reference sources appropriately.
  *Examples: maps, charts, outlines, concept maps . . .*

- 4-S-300    Formulate questions for research.
- 4-S-302    Draw conclusions based on information and evidence.
- 4-S-403    Present information and ideas orally, visually, concretely, or electronically.

**Aboriginal Languages and Cultures**
***3.2 School***
*3.2.2 Physical Environment*
- 3.2.2: B-4  Use student-generated criteria to classify things in the physical environment (e.g., rocks and minerals, trees and plants, materials and substances).
- 3.2.2: G-4  Explain how certain things in the physical environment protect or sustain people (e.g., fences help keep out intruders or show boundaries, the sun gives warmth and light).

***3.3 Within the Community***
*3.3.2 Daily Life and Sustenance*
- 3.3.2: E-4  Suggest ways in which the local environment is or can be respected, maintained, and sustained (e.g., recycling, renovations, road repair, respect for private property).

***3.4 Outside the Community***
*3.4.1 Living Things and Natural Resources and Phenomena*
- 3.4.1: A-4  Describe ways in which living things depend on each other (e.g., animals help distribute pollen, food chains and food webs).
- 3.4.1: H-4  Explain ways in which natural phenomena (e.g., blizzards, thunderstorms, floods) affect the activities of living things.

**Literacy with ICT Continuum**
***Plan and Question***
- P-2.1   constructs "how and why" questions, predictions, hunches, educated guesses, and hypotheses and identifies information needs

***Gather and Make Sense***
- G-1.1   finds and collects information (text, images, data, audio, video) from given media sources
    *examples: within applications, CD-ROMs, the Internet, broadcast media, email . . .*
- G-1.2   identifies sources of information and provides bibliographic/reference data
    *examples: titles, authors, publication dates, URLs, standard bibliographic formats . . .*
- G-1.3   records data or makes notes on gathered information and ideas using given categories and given ICT
    *examples: tables, graphic organizers, spreadsheets . . .*
- G-1.5   questions whether information from media sources is real, useful, and/or distracting
    *examples: falsified digital images, banners, and/or pop-up advertisements . . .*

***Produce to Show Understanding***
- Pr-1.1  participates in establishing criteria for student-created electronic work
- Pr-1.2  composes text, records sound, sketches images, graphs data, and/or creates video
- Pr-1.3  edits electronic work according to established criteria, conventions, and/or standards
    *examples: text, images, sound, concept maps, multimedia presentations, email, tables, spreadsheets, graphs, video, animation, web pages, wikis, blogs . . .*

- Pr-2.2  revises electronic work to improve organization and clarity, enhance content and artistry, and meet audience needs, according to established criteria, feedback, and personal preferences
  *examples: by creating and/or critically revising text, images, and/or sound to enhance electronic work; by revising audio/video clips or effects; by adjusting the pace and transitions in multimedia presentations; by adding animation to web pages . . .*

### Communicate
- C-1.1  displays and/or discusses electronic work
  *examples: text, images, sound, concept maps, multimedia presentations, email, tables, spreadsheets, graphs, video, animation, web pages, wikis, blogs . . .*
- C-2.1  discusses information, ideas, and/or electronic work using tools for electronic communication
  *examples: email, electronic whiteboards, web pages, threaded discussions, videoconferences, chats, instant messages, camera phones, wikis, blogs, podcasts, online whiteboards . . .*

### Reflect
- R-1.1  participates in guided conferences to think about using ICT to learn
  *examples: with peers, parents, teachers . . .*

### SUGGESTED LEARNING RESOURCES
**Software**
- word processing
- email
- web page authoring

**Internet**
- IMYM Links Database. <www.edu.gov.mb.ca/k12/tech/imym/resources/links.html>.
- Bell Museum of Natural History. "Build-a-Prairie." *On the Prairie.* <www.bellmuseum.org/distancelearning/prairie/build/>.
- Manitoba Conservation. *Wildlife and Ecosystem Protection.* <www.manitoba.ca/conservation/wildlife/>.

**Print**
- Appendix C: Index of Teaching, Learning, and Assessment Strategies
- Manitoba Education and Training. *Kindergarten to Grade 4 English Language Arts: A Foundation for Implementation.* Winnipeg, MB: Manitoba Education and Training, 1998. (See Strategies That Make a Difference—Questioning, 30–36.)
- Manitoba Education and Youth. *Independent Together: Supporting the Multilevel Learning Community.* Winnipeg, MB: Manitoba Education and Youth, 2003. (See BLM 5: Focused Observation Form, available online at <www.edu.gov.mb.ca/k12/cur/multilevel/blm/blm_5.doc>.)
- Montgomery, Sy. *The Snake Scientist.* Boston, MA: Houghton Mifflin Co., 1999.

**Videos**
- *The Living Prairie: A Tour of Manitoba's Tall Grass Ecosystem.* By Gene Fortney. Videocassette. Manitoba Education, Citizenship and Youth, 2004. (IRU–#4306)
- *Time and Place: The Snakes of Narcisse.* Season 1. Disk 3. Dir. Robert J. Long. Prod. WestWind Pictures, Inc. Videodisk. National Film Board of Canada, 2004. This DVD is also available as a videocassette. (IRU–D-10406)

**BLMs**
- BLM M3.1#1: Stewardship and Sustainability in Manitoba Learning Centre
- BLM M3.1#2: Stewardship and Sustainability in Manitoba Inquiry Chart
- BLM M3.1#3: Stewardship and Sustainability in the News Planner
- BLM M3.1#4: Rebuilding the Prairie Learning Centre
- BLM M3.1#5: Conserving Diversity: Before and After Learning
- BLM M3.1#6: Group Work Reflection
- BLM OLE.4#11: Group Work Assessment

**TBLM**
- TBLM M2.1#1: Group Processing Checklist—Form B

*SUGGESTIONS FOR INSTRUCTION*
**Preparation and Set-up**
- Arrange a field trip to view the snakes at the Narcisse Snake Dens. For information on the seasonal status,
    — visit the following website: Manitoba Conservation. *Wildlife and Ecosystem Protection.* <www.manitoba.ca/conservation/wildlife/>.
    — call the Manitoba Conservation and Water Stewardship automated information line at 945-6784 (in Winnipeg) or toll-free at 1-800-214-6497
- Arrange to have guest speakers talk to students about conserving habitats and wildlife in Manitoba.
- Arrange a field trip to the tall grass prairie preserve at
  The Living Prairie Museum Interpretive Centre
  2795 Ness Avenue, Winnipeg  MB
  For information, call 204-832-0167.
- Review school or school division policy on Internet publishing for students.
- Preview videos to select sections for student viewing.
- Review OLE.5: Share the Learning, OLE.6: Collaborative Learning, and OLE.10: Electronic Collection.
- Review ICT.2: Write This Down, ICT.3: Riddle This, ICT.7: Make Your Point, and ICT.8: Look for It: Learning to Search the Internet.

**Activating Strategies**
- Students complete the *Before Learning* section of BLM M3.1#5: Conserving Diversity: Before and After Learning on the Narcisse Snake Dens and the tall grass prairie. They discuss their explanations with the class.
- Students listen to a presentation on conserving habitats and wildlife in Manitoba.

**Acquiring Strategies**
- Students take a field trip to the Narcisse Snake Dens and/or watch the video *Time and Place: The Snakes of Narcisse.*

- Students conduct an inquiry on the snakes of Narcisse. They discover conservation practices, the use of technology to learn more about the snake population, and the effects of human behaviour on the species.
- Students tour the Living Prairie Museum Interpretive Centre and/or watch the video *The Living Prairie: A Tour of Manitoba's Tall Grass Ecosystem*.
- Students conduct a group inquiry on the tall grass prairie of Manitoba. They identify the interconnected nature of the tall grass prairie, and learn about the importance of all the elements.
- Students participate in learning centres:
  — BLM M3.1#1: Stewardship and Sustainability in Manitoba Learning Centre
  Students use the inquiry process to identify strategies that are important to environmental stewardship and sustainability in Manitoba, as well as to highlight steps that Manitobans are already taking. They share their learning by writing a letter to the editor of a newspaper.
  — BLM M3.1#4: Rebuilding the Prairie Learning Centre
  Students use the "Build-a-Prairie" website to help re-establish the tall grass prairie. They jot notes to record new learning.

**Applying Strategies**
- Students collaborate to create a class wiki on conserving diversity in Manitoba's environment, including the tall grass prairie and the snakes of Narcisse. They come to a consensus on the format and content of the site. They identify tasks that must be completed and create a plan for sharing the workload.
- Students complete the *After Learning* section of BLM M3.1#5: Conserving Diversity: Before and After Learning.
- Students reflect on their group work using BLM M3.1#6: Group Work Reflection.

***SUGGESTIONS FOR ASSESSMENT***
- Review students' completed BLM M3.1#5: Conserving Diversity: Before and After Learning to assess their prior knowledge and their change in understanding after they completed the task.
- Observe students during the group process. Do they listen to others and contribute to the group? Use TBLM M2.1#1: Group Processing Checklist—Form B to record observations. Are students able to self-assess the group process using BLM M3.1#6: Group Work Reflection?
- Observe students during the writing process and during peer editing. Conduct writing conferences with students to assess the writing process and to guide instruction.
- Conduct guided conferences with student to have them think about using ICT to learn. Keep a record using the Literacy with ICT Continuum.

***CONNECTION TO* CANADIAN YOUTH FORUM: CELEBRATING COMMUNITY AND DIVERSITY**
- Students experience the diversity of the environment, and learn about the responsibility they have to protect and conserve it. They apply their learning of Manitoba's diverse natural environment in their preparation for the *Canadian Youth Forum*.

## BLM M3.1#1: Stewardship and Sustainability in Manitoba Learning Centre

**Overview**
At this learning centre, you will research to find strategies that are important to environmental stewardship and sustainability in Manitoba. You will share your learning by writing a letter to the editor of a newspaper.

**Resources**
- print and electronic sources
- email partners
- BLM M3.1#2: Stewardship and Sustainability in Manitoba Inquiry Chart
- BLM M3.1#3: Stewardship and Sustainability in the News Planner
- BLM OLE.4#11: Group Work Assessment

**Tasks**
- Use print and electronic sources to gather information on strategies for stewardship and sustainability in Manitoba. Use BLM M3.1#2: Stewardship and Sustainability in Manitoba Inquiry Chart to take note of what is already happening in this area across the province.
- Contact your email partners to identify what actions are being taken in their community.
- Choose the format you will use to share your learning, and complete BLM M3.1#3: Stewardship and Sustainability in the News Planner. Write your letter to the editor. Work with your group members to edit and revise your work.
- How did your group cooperate? Reflect on your group work and complete BLM OLE.4#11: Group Work Assessment.

**Suggestions for Collaboration**
- Decide how your group will share the responsibilities of researching.
- Remember to make constructive comments as you work together to edit and revise your work.

**What to Do with the Results of This Learning Centre**
- Submit your letter to the editor to local newspapers, with your teacher's help.

**Assessment Criteria**
- Your letter to the editor meets the class criteria.
- Reflect on your group work. Use BLM OLE.4#11: Group Work Assessment to assess your group work.
- You have recorded information on strategies that are important for stewardship and sustainability in Manitoba using key words and phrases. Sources are cited correctly.

## BLM M3.1#2: Stewardship and Sustainability in Manitoba Inquiry Chart

Name  _____   Date  _____

Use this page to record information from your inquiry into strategies that are important to environmental stewardship and sustainability in Manitoba. Remember to use key words and phrases, and cite your sources.

| Sources | What can Manitobans do to help take care of the environment? |
|---|---|
| | |
| | Email partner's information and ideas: |
| | What is already being done in Manitoba to practise environmental stewardship and sustainability? |
| Reflection | |

## BLM M3.1#3: Stewardship and Sustainability in the News Planner

Name _____     Date _____

Organize your thoughts and ideas for your letter to the editor or your news article on the following chart. Use your completed chart as a guide for your writing about strategies that are important to environmental stewardship and sustainability in Manitoba.

| Main Idea | Key Words |
|---|---|
| | |
| **Important Details** (what the reader should know) | |
| **Stewardship and Sustainability Facts** (to support writing—include sources) | |
| **Heading** (to grab the reader's attention) | **Closing** (to remind the reader of the importance of the issue or to motivate the reader to take action) |

## BLM M3.1#4: Rebuilding the Prairie Learning Centre

**Overview**
At this learning centre, you will use the "Build-a-Prairie" website to learn how to help rebuild the tall grass prairie. You will jot notes of new information to be included in the class wiki.

**Resources**
- Bell Museum of Natural History. "Build-a-Prairie." *On the Prairie.*
  <www.bellmuseum.org/distancelearning/prairie/build/>.

**Tasks**
- Go to the "Build-a-Prairie" website. Follow the instructions there to help re-establish the tall grass prairie.
- Jot notes of any new information that you discover.
- Discuss with your group what you learned about the tall grass prairie—the plants and animals found there, and how to restore the tall grass prairie.

**Suggestion(s) for Collaboration**
- Work with a partner to share the reading and recording of information.

**What to Do with the Results of This Learning Centre**
- Share your jotted notes with your group. They will be used in creating the class wiki.

**Assessment Criteria**
- Jotted notes contain accurate information, recorded in key words and phrases.
- The notes have been edited for correct spelling.

## BLM M3.1#5: Conserving Diversity: Before and After Learning

Name _____     Date _____

Topic     Narcisse Snake Dens and Tall Grass Prairie

Read each statement below and comment on why you agree or disagree with the statement.
Make your comments **before** and **after** you learn about the topic.

| Statement | Before Learning | After Learning |
|---|---|---|
| Tall grass prairie can be found all across Manitoba. | | |
| Once a habitat is damaged, there is nothing that can be done to help restore it. | | |
| Fire is helpful in keeping tall grass prairie healthy. | | |
| Technology has helped people to learn more about plant and animal populations. | | |
| Taking away a species from a habitat doesn't really affect other species. | | |

## BLM M3.1#6: Group Work Reflection*

Name _____     Date _____

1.  Give two examples from your work that show that you and your group were on task.

    _____

    _____

2.  If your group was off task, tell what happened. (If your group was always on task, skip this question and the next one.)

    _____

    _____

    _____

    _____

    _____

3.  What did you or your group do to get back on task? Did it work?

    _____

    _____

    _____

4.  How would you rate your group's work today?

| ⬆ | ⬆ | ⬆ | ⬆ | ⬆ |
|---|---|---|---|---|
| ⬇ | ⬇ | ⬇ | ⬇ | ⬇ |

**Great!**                                        **On Task**                    **Off Task**
**Right on**                                      **Most of**                  **Most of**
**Task!**                                          **the Time**                **the Time**

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*   Source: Manitoba Education and Training. *Kindergarten to Grade 4 English Language Arts: A Foundation for Implementation.* Winnipeg, MB: Manitoba Education and Training, 1998. BLM–40.