

Western Provinces

For the purposes of this inquiry, we identified the Western Provinces as Manitoba, Saskatchewan, Alberta, and British Columbia.

Manitoba

Manitoba's curriculum documents seem somewhat unique from the other provinces and territories with numerous outcomes not found in other jurisdictions. The Social Studies curriculum in particular stood out in this review as the curricula is very robust and filled with outcomes related to sustainability, climate change, and Indigenous knowledge. In addition, the language used often implies an intersectional perspective with links to social justice pedagogy. Additional pan-curricular materials are also available such as the document *Integrating Aboriginal Perspectives into Curricula* (2003).

English (Language Arts)

Manitoba's English curriculum has a publication date range of 1996-2000 with a curriculum revision currently in progress. Similar general outcomes are spread across the grades with enough flexibility for teachers to connect many of them to Indigenous environmental topics if desired. For example, fundamental themes such as a Consider Other People's Ideas outcome, as well as specific outcomes such as:

- 2.2.2 Connect self, texts, and culture: Discuss own and others' understanding of various community and cultural traditions in various places and times as portrayed in oral, literacy, and media texts [including texts about Canada or by Canadian writers] (across all grades - np)

Manitoba's high school English program is streamed into different ability groupings and has similar general outcomes continuing from elementary grades again with flexibility within the outcomes to teach within the context of this inquiry.

Math

Manitoba's Math documents are grouped into Elementary (2013) and Secondary (2014) and follow similar strands as other provinces and territories. Within the front matter of the elementary Math curriculum there is a reference to teaching Indigenous children (p. 4). In a manner similar to our comments on Ontario's efforts in this regard, we acknowledge the importance of promoting awareness of Indigenous pedagogies, but remain somewhat concerned that over-prescribing pedagogical strategies for Indigenous learners introduces the risk of perpetuating stereotypes. As such, we advocate for an approach that encourages teachers to develop awareness of possible cultural influences, but ultimately respond to the particular needs and learning styles of individual students, which may or may not align with traditional cultural models. Within Manitoba's elementary Math curriculum, a general outcome related to data could be used to tie to this project and there are no other explicit outcomes that could connect directly.

High school Math courses in Manitoba are streamed into different ability levels after Grade 9 with flexibility to link to the themes of this inquiry through a Statistics and Probability strands. In Grade 11 and 12, students need to research a historical or current event or personal area of interest within the context of Mathematics which could also provide an opportunity to consider Indigenous Environmental topics, for example through consider longitudinal environmental data related to an ongoing issue in a particular community.

Science

Manitoba's Science curriculum has a publication range between 1999-2013 with each front matter containing a reference to sustainable development. Kindergarten – Grade 4 curricula are in one document with topics and units that could be related to critical Indigenous environmental topics such as the needs of living things, air and water in the environment, growth and changes in plants, soils and the environment, habitats and communities with each unit offering space to incorporate and adapt content. Specific outcomes of interest include:

- 4-1-14 Investigate natural and human-caused changes to habitats, and identify resulting effects on plant and animal populations and interactions (p. 3.48)
- 4-1-17 Recognize and appreciate how traditional knowledge contributes to our understanding of plant and animal populations and interactions (p. 3.48)

Grades 5-8 are in one document with relevant topics including weather, diversity of living things, and interactions within ecosystems, Earth's crust, water systems, and some specific outcomes that link more directly to this inquiry such as:

- 5-4-18 Recognize that climates around the world are ever changing, and identify possible explanations (p. 3.22)
- 7-1-05 Identify and describe positive and negative examples of human interventions that have an impact on ecological succession or the make up of ecosystems (p. 3.47)
- 7-1-06 Identify environmental, social, and economic factors that should be considered in the management and preservation of ecosystems (p. 3.47)
- 7-4-11 Identify environmental, social, and economic factors that should be considered in making informed decisions about land use (p. 3.57)
- 8-4-18 Identify environmental, social, and economic factors that should be considered in the management of water resources (p. 3.74)

As with most other jurisdictions, High School Science in Manitoba breaks down into specialty areas with limited possible connections in Chemistry and Physics. However, Grade 9 and 10 General Science courses contain some units that could relate to this inquiry such as outcomes related to climate change and sustainability in Grade 10. Biology 11 incorporates personal wellness within each unit with notes in the front matter regarding sustainable development, moral and ethical characteristics of students, ethical issues, and advising teachers not to avoid controversial topics and issues in their classes as these issues provide students with a means to make personal connections to the topic.

Social Studies

Manitoba's Social Studies curriculum ranges in publication date from 2003-2016. It is quite robust with a social justice tone, holistic approach to diversity, and Indigenous content spread across each grade. There are numerous references also to the environment beginning in Kindergarten as well as exploring relationships with the Land. Other notable examples arise in Grade 1 with examinations of media's influences on our lives and, starting in Grade 2, students are expected to engage in a research project framed through multiple references to Indigenous and environmental content. Grade 5 examines the history of Canada and colonization and Grade 6 has one particular outcome of note that ties to this inquiry:

- 6-KL-026A Describe the influence of the land on their First Nations, Inuit, or Métis identity (p. 92)

Manitoba's Grade 7 Social Studies curriculum considers bias and discrimination and looks at how stereotypes are portrayed in the media. It also includes a few outcomes related to sustainability with one that aligns with this inquiry quite explicitly:

- 7-VL-009 Be willing to take actions to help sustain the natural environment in Canada and the world (p. 104)

Grade 8 continues to examine racism as well as encouraging consideration of Traditional Knowledge in understanding the Land. The Grade 9 curriculum references the WNCP in the front matter and is quite large with over 440 pages. The front matter also references sustainability, environmental citizenship, dealing with controversial issues, and the pedagogy of social justice. There are numerous connections with Indigenous culture throughout this grade as well as some specific outcomes that could be linked to this inquiry:

- VL-006 Respect traditional relationships that Aboriginal peoples of Canada have with the land (p. 70)
- KP-045 Describe factors related to Aboriginal self-determination in Canada. Examples: Indian Act, treaties, land claims, natural resources, traditional forms of decision making (p. 73)
- KP-046 Give examples of ways in which people can individually and collectively influence Canada's political and social systems. Examples: voting, political parties, labour organizations, civil disobedience, NGO's, lobbying (p. 73)

Grade 10 continues with a similar social justice lens and there remain many connections to sustainability and Indigenous cultures throughout as well as outcomes related to students understanding complex societal issues. The following outcomes could be linked to Indigenous environmental topics:

- KI-004 Identify Aboriginal perspectives and rights regarding natural resources and their use. Examples: perspectives – sacred, caretaking; resources – land claims, fishing and hunting rights, mineral rights (p. 138)

- VI-003 Be willing to consider diverse views regarding the use of natural resources (p. 150)
- S-103 Promote actions that reflect principles of sustainability (p. 162)

Grade 11 looks at the history of Canada; there are less explicit spaces to connect with this inquiry, but Indigenous content continues with themes such as exploring the impact of colonization on Indigenous people. Grade 12 has a law focus with several outcomes that could tie well to this inquiry including:

- 1.4 Explore First Nations, Métis, and Inuit practices related to law and the evolving legal relationship between first Nations, Métis, and Inuit people and non-Indigenous Canadians, including the treaty relationship (p. 3)
- 3.13 Analyze the overrepresentation of Indigenous people incarcerated in Manitoba and in Canada, and how the judicial system is responding to this issue, particularly in light of the recommendations made by the Aboriginal Justice Inquiry (1991) and in the Truth and Reconciliation Commission of Canada: Calls to Action document (p. 6)
- 4.4 Examine Indigenous practices and case law regarding rights on reserves, land titles, and treaty lands, as well as property rights on reserves and civil actions against government, such as residential school compensation and treaty land rights (p. 7)

Students in Grade 12 must also engage with a research project from a list of 6 topical areas which all include environmental protection and climate change in some manner. An additional course is offered in Grade 12 in First Nations, Métis, and Inuit (FNMI) Studies with extensive content related to this inquiry including land claims, treaties and rights, as well as economic development. Another elective of note is Sustainable Tourism for Grades 11 and 12. Further supplementary resources are also available related to Indigenous education and Sustainable development (see references below).

References

Manitoba Education and Training (2018) *Curriculum: Kindergarten to Grade 12*. Retrieved from <http://www.edu.gov.mb.ca/k12/cur/>

Manitoba Education and Training (2014). *Education for sustainable development in Manitoba education and advanced learning*. Retrieved from http://www.edu.gov.mb.ca/k12/esd/pdfs/esd_mb.pdf

Manitoba Education and Youth (2003). *Integrating Aboriginal perspectives into curricula*. Retrieved from http://www.edu.gov.mb.ca/k12/docs/policy/abpersp/ab_persp.pdf

Western and Northern Canadian Protocol for Collaboration in Education (1993). *Western and northern Canadian protocol (WNCP) for collaboration in (Kindergarten to Grade 12) education*. Retrieved from <https://www.wncp.ca/media/49521/protocol.pdf>