

New Brunswick

New Brunswick follows a similar curricular structure to the other Atlantic provinces' foundational documents which includes the Essential Graduation Learning outcomes. The Science curriculum in general, which derives from the Pan-Canadian Science Curriculum document, and the Citizenship strand in Social Studies also offer many possible points of connection to sociocritical environmental topics. For example, the front matter of the Science outcomes include references to teachers including diverse cultural perspectives as a suggested method for teaching and learning. However, there are a limited number of outcomes that are explicitly linked to Indigenous cultures and knowledge systems. Promising elective courses also exist that could be tailored to focus on Indigenous cultures and critical environmental issues, however they may not be offered as part of a students' program as they are often considered optional or complimentary. Please see below for more detailed discussion of these and other curricular areas.

English

Within the Kindergarten – Grade 3 English (1998) curriculum documents there are suggested activities linked with specific learning outcomes related to Indigenous cultures such as the use of a talking journal (talking circle) that may employ a talking stick, acknowledging first languages, and inviting family members into the class from diverse backgrounds. These moments could indicate to teachers that incorporating Indigenous knowledge systems and practices ought to become part of the learning experiences of all children. There also seems to be amenability towards using texts that reflect cultural diversity, some outcomes have students exploring how language is used, and explorations into biases and stereotypes are encouraged. While there are not explicit connections to critical Indigenous environmental topics, teachers could tie some of the outcomes to local and regional issues. These general themes continue in Grades 4-6 with further encouragement to develop a deeper understanding of how language is used to shape narratives—another thread that could be employed in exploring Indigenous topics. The following outcome of note from Grades 4-6 connects to this inquiry:

- SCO#3 Identify examples of prejudice, stereotyping, or bias in oral language; recognize their negative effect on individuals and cultures; and attempt to use language that shows respect for all people (p. 58)

Grades 7-8 also look at language, interactions with each other, and how bias is shaped through language. High school English curricula also offer space to connect with Indigenous environmental topics but there are no direct outcomes of note. Inquiry projects are encouraged that offer flexibility for teachers and students to explore and deepen their understanding of local and regional issues.

Math

New Brunswick's Math curricula range in date of publication between 2008 and 2013 and offer teachers and students multiple opportunities to explore Indigenous environmental issues. For example, the use of data within the statistics and probability strand beginning in

Grade 1. More layers are added in Grade 2 with patterns and relations and shape and space strands wherein teachers could link meanings of equality and inequality with the impact of globalization on the environment and Indigenous communities as well as studying, for example, maps that show pipelines and other transportation methods of resources. Similar opportunities continue through to Grade 9 with more specific outcomes that could also provide interesting cross-curricular connections with English such as:

- SCO: SP1 Describe the effect of the following on data collection: Bias, use of language, ethics, cost, time and timing, privacy, cultural sensitivity (p. 87)

Students in Grade 9 also must develop and implement a plan to collect data that presents an opportunity for engagement with Indigenous environmental topics. High school Math courses are streamed—some classes such as Financial and Workplace Math provide opportunities to connect to “real world” experiences which could be linked to the project such as continuing to use data related to environmental monitoring and maps of pipelines that cross Indigenous territories. The high school Math outcomes do not explicitly relate to Indigenous environmental issues, however a research project could be developed to link to Indigenous environmental content. However, as the curriculum is quite dense and prescriptive, flexibility seems somewhat restricted.

Science

New Brunswick’s Science curricula have an expansive range of publication dates between 1998 and 2012 and are organized as unit plans with assessment and teaching strategies. The Kindergarten to Grade 2 curricula include opportunities to engage with Indigenous environmental topics within the Environment; Community; and the Change and the Physical Environment units. One specific outcome of note in Grade 1 looks at Aboriginal people’s relationships with place over time (see below). Grades 3-12 have all outcomes listed in one document, with separate documents providing more in-depth resources. Within the Science, Technology, Society, and Environment (STSE) outcomes there are explicit connections to caring for the environment, how humans impact the environment, advantages and disadvantages of sustainability, as well as diversity. There are also independent inquiry projects in each grade that students could use to learn about Indigenous environmental issues.

High school Science is divided into speciality areas. Physics and Chemistry do not offer any connections to Indigenous environmental topics. However, Biology in Grade 11 offers a unit on biodiversity which encourages students to explain how ecosystems are related to sustainability as well as the impact human behaviour has on the environment. Two high school courses, Introduction to Environmental Science 120 and Physical Geography 110, have clear connections to Indigenous environmental topics. For example, the Introduction to Environmental Science unit in Environmental Science 120 includes a student project that again allows students an opportunity to learn about critical Indigenous environmental issues.

Social Studies

New Brunswick’s Social Studies curricula also span a wide publication range from 1993-2012 with outcomes for all grade levels contained within one summary program of studies document. Optional high school courses are provided separately from the main program of

studies. Social Studies centres on four strands including Citizenship, Power, and Governance, People, Place, and Environment, Culture and Diversity, and Interdependence. Within these areas across each grade there are spaces for teachers to look at critical Indigenous environmental topics specifically in the People, Place, and Environment strand:

- Key Stage Curriculum Outcomes: People Place, and Environment: Analyse ways in which social, political, economic, and cultural systems develop in response to the physical environment (by the end of grade 9) (p. 25)
- Key Stage Curriculum Outcomes: People Place, and Environment: Evaluate the role of perspective, power, and authority in the use of and development of policies to manage Earth's resource (by the end of grade 12) (p. 25)

Through mandating that teachers consider the socioecological dynamics described above, New Brunswick's Social Studies curriculum provides a strong prompt for critical engagement with Indigenous environmental issues. Additional high school courses of interest include Canadian Geography 120, Canadian History 122, Modern History 111/112/113, Law 120, Economics 120, Native Studies 120, Political Science 120, Ancient Medieval History 120, and World Issues 120. Law 120, in particular, has sections relating to environmental law and Aboriginal peoples and the law. Other notable key outcomes such as consideration of the impact of the Indian Act on the rights of Aboriginal people, and how current laws work to support sustainability. Native Studies is another course of note that provides a strong focus on Indigenous cultures in New Brunswick.

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