

1. Subject: Education

Policy area: Environmental Studies/Climate Justice Curriculum in Primary to 12 Schools: Submitted March 8, March 26 (Revision)

2. Relevant Principles and Beliefs

A holistic, integrated Environmental Studies/Climate Justice curriculum from Primary to 12 would support teaching and learning related to Green Party principles of ecological wisdom, social justice, respect for diversity, participatory democracy, nonviolence, and sustainability. Climate Justice, a necessary focus in Environmental Studies, emphasizes the urgency of addressing climate change through socially just actions. As treaty people on shared Mi'kmaw territory, our educational policies and practices must recognize and honour Indigenous ecological knowledge and protocols for sharing as expressed in Truth and Reconciliation Calls to Action. We express our gratitude to the Mi'kmaq for sharing their understanding of "Netukulimk/ Msit no'kmaq, the interconnectedness of all things" (Tim Bernard et al., 2015, 153-194) and strive to emphasize this concept through inclusive learning and integrated curriculum approaches in safe, respectful, healthy, and sustainable indoor and outdoor learning environments. Development of a holistic, integrated Environmental Studies/Climate Justice curriculum would support respect for Indigenous ecological wisdom, and protocols for sharing as required in Truth and Reconciliation Call to Action: #10 iii) Developing culturally appropriate curricula and vii) Respecting and honouring Treaty relationships. Ongoing consultation with Mi'kmaw communities would provide curriculum guidance for respecting Mi'kmaw concepts of interconnectedness that align with Green Party principles.

Environmental Studies provides scope for Climate Justice, an essential focus of Environmental Studies. Climate Justice would expand the current teaching and learning of Environmental Studies to include social, physical, psychological and emotional impacts of climate change and the urgency in addressing inequities in underprivileged populations. It would necessitate democratic structures for participation and decision-making. It would support the strengths and needs of children and youth in contributing to a more equitable and just society. As "advocates for climate justice are striving to have ... inequities (related to climate change) addressed head-on through long-term mitigation and adaptation strategies" (Platform 2021), curriculum initiatives would promote social activism. Environmental Studies/Climate Justice as a curriculum focus in all subject areas would support Justice for all: Racial Justice is Indigenous Sovereignty is Queer Liberation is Gender Justice is Disability Justice is Migrant Justice is Economic Justice is Language Justice is Justice for All (2021 Platform).

Integrated, multidisciplinary educational approaches such as experiential, community-centered, project-based, and lifelong learning would be of value in facilitating environmental awareness, literacy, and stewardship dependent on inclusionary participation, contribution, and decision-making. The approaches, adaptable to a mix of authentic, community-connected, school-wide, classroom-based and virtual platforms, would create opportunities for teachers and learners to develop relevant understanding and skills related to Climate Justice themes and action plans. Multidisciplinary and cross curricular school-wide, multiage projects as well as classroom initiatives would be based on themes that draw from combinations of subject areas. Following the policy statements, there are examples of relevant research and plans for action from provinces and countries that have integrated environmental studies into all curriculum areas. These examples provide valuable direction for incorporating respect for Indigenous ecological wisdom and protocols for sharing, inclusionary participation and

decision-making, respectful social interactions, sustainability, food security and healthy food choices, addressing urgency of climate change issues, making informed decisions on energy use among others into all subject areas and on a school- wide and community- centered basis.

Attention to personal safety and security and classroom and school conditions to increase the well-being of learners, teachers, and all school-based personnel are neglected areas in curriculum development. The pandemic increases awareness of surroundings, indoor air quality, safe spaces, food security, physical, social, psychological, and emotional needs, and highlights the importance of integrating these elements in school-wide as well as classroom initiatives. Equitable access to curriculum initiatives related to greening of schoolyards and school/community gardens would provide valuable opportunities for outdoor teaching and learning, for improving food security, for inclusive planning and decision-making, and for holistic and integrative approaches to environmental Studies/Climate Justice.

3. Current State Of Affairs

GPNS Policy Under Review: Education 24. Develop further courses in environmental studies.

Policy 24. Develop further courses in environmental studies. does not recognize the concept of interconnectedness of environmental studies to all other curricular areas. The policy needs to emphasize the significance and urgency for understanding and action with regard to climate justice/environmental sustainability.

The Nova Scotia curriculum outcomes related to environmental awareness including Indigenous perspectives, protection, and sustainability are distributed primarily throughout science and social studies curriculum from Primary to Grade 8 and are included in specific subject areas at the secondary level.

Current Provincial Curriculum

For Primary to Grade 8, the environmental outcome is **a single outcome** at each level.

Examples of Current Curriculum Outcomes

Social Studies:

Grade 1 Learners will implement age-appropriate actions for responsible behaviour in caring for the environment.

Grade 2 Learners will analyse ways for supporting sustainable development in local communities.

Grade 4 Learners will investigate the relationships between humans and the physical environment.

Grade 6 Learners will investigate how environment influenced the development of an ancient society.

Document: Nova Scotia Department of Education

Social Studies P-6 at a glance: <https://curriculum.novascotia.ca/english-programs/social-studies>

Grades 7 and 8

Gr. 7 Learners will reflect on the impact of government policies and the denial of treaty rights on

Mi'kmaw communities and individuals in Mi'kma'ki.

Gr. 8 Learners will formulate responses to change in Canadian society.

Science

Gr.1 Learners will analyse interconnectiveness of living things and the environment. **Gr.3** Learners will analyse soil in the **environment**. An investigation of soil will lead learners to the discovery that soil is an **environment** for many living things. By examining soils, ... learners discover how soil is impacted by humans and the **environment**.

Grades 7 and 8

Gr. 7 Learners will reflect on the impact of government policies and the denial of treaty rights on Mi'kmaw communities and individuals in Mi'kma'ki.

Gr. 8 Learners will formulate responses to change in Canadian society.

There is a reference to the Mi'kmaw concept of interconnectedness in the renewed Gr. 8 social studies curriculum related to the outcome:

Learners will formulate responses to change in Canadian society. ? How can we apply the Mi'kmaw teaching of Netukulimk when considering current environmental issues?

This interconnectedness does not relate to the actual curriculum development.

Gr. 9-12 : https://curriculum.novascotia.ca/english-programs#blocktabs-english_curricula-2

Overview of Environmental Outcomes:

Science 9 (2001, 2019)- references to environment and environmental stewardship

Citizenship 9- several references to the environment

Science 10- section on environmental sustainability including climate change **Mi'kmaw Studies**

11 Implementation Draft- some reference to Mi'kmaw relationship with land **Oceans 11-**

references to the environment; one reference to climate change **Geography 10-**many references to environmental factors

Advanced Placement Courses

- equitable access encouraged

AP Environmental Science 12- a number of references to climate change

AP Biology 12 - section on ecology

AP Human Geography 12- references to human impact and climate change

Gr. 9-12

Essential Graduation Competencies

Environmental Issues mentioned on P.3 under Citizenship

[https://curriculum.novascotia.ca/sites/default/files/documents/resource-files/Essential%20Graduation%20Competencies%20\(2015\).pdf](https://curriculum.novascotia.ca/sites/default/files/documents/resource-files/Essential%20Graduation%20Competencies%20(2015).pdf)

for example: Community Based Learning 11: Citizenship (CZ) Learners are expected to contribute to the quality and sustainability of their environment, communities, and society. They analyse cultural, economic, environmental, and social issues, make decisions, judgment, solve problems, and act as stewards in a local, national, and global context.

Companion for Educators: Taking on Climate Change, March 2013

https://www.novascotia.ca/nse/climate-change/docs/AppendixC_ClimateChange_TeachingCompanion.pdf

Further Background on Climate Change by Brenda Ryan

C:\Users\The CK's\Downloads\Climate Change Research by Brenda Ryan.odt

4. Policy Statements for Environmental Studies/Climate Action Curriculum

Support the development of a whole school approach that implements Environmental Studies/Climate Justice as an integrated and cross-curricular subject at all grade levels from Primary to 12, in partnership with Mi'kmaw communities and in consultation with all stakeholders including Mi'kmaq, African Nova Scotian communities, Acadian, 2SLGBTQQIA+, disabled, and newcomer communities, NSTU/teachers, school staff, parents, community members, and students

Include all Green Principles in Environmental Studies/Climate Justice

Initiate an environmental assessment and plan for the greening of schoolyards as outdoor learning spaces in all subject areas with a particular focus on integrated Environmental Studies/Climate Justice activities

Support classroom/school-based participation in greening of schoolyards by recognizing and assessing existing green features and by researching future environmentally sustainable, cost effective ideas for improvement

- explore green initiatives to vitalize schoolyards as educational spaces and as resources for integrated curricular project-based learning including all subject areas from primary to 12**
- respecting Truth and Reconciliation protocols, consult with local Mi'kmaq community chiefs/elders regarding possible guidance, wisdom related to holistic connection to land, and potential leadership and involvement in greening**
- support students, school staff, and interested community members in developing school-based plans for greening the school grounds as**

outdoor education spaces and resources

· develop outdoor education curricula related to schoolyard habitats integrating environmental stewardship, physical activity, and project-based learning in all subject areas

Provide guidance and supports for current and future school/community gardens in all schools, or alternatively communities in the province to promote food security, environmental sustainability, lifelong healthy food choices, social inclusion, life skills, the arts, and all subject areas, through integrated curricular action plans and inquiry and project-based learning on a classroom as well as school-wide basis.

Develop an inclusive school-wide, classroom-based, and community linked process for equitable access of all students to major initiatives related to the following: greening of schoolyards, school/community gardens, respect for diversity, and anti-racism, by means of action plans and curriculum-based, integrated, multi-age/level project-based learning related to environmental/social justice themes.

5. Conclusion: Recommendations for Improvement and Sources

State of Affairs in Other Provinces and Countries

How To Integrate Environmental Curriculum and Action

As several provinces and countries provide more integrated approaches to environmental studies, substantial research and curriculum development are available for adaptation.

Follow general guidelines from the 2016 Global Education Monitoring Report, Education for People and Planet

HOW DOES EDUCATION BEST SUPPORT SUSTAINABILITY

- Draws on diverse viewpoints, particularly indigenous knowledge and practices •**
- Emphasizes learning that crosses boundaries**
- Helps learners acquire new skills and competencies for life**
- Transforms schools to meet environmental challenges: the whole institution approach**

Wals, A. E. J., & Benavot, A. (2017). Can we meet the sustainability challenges? The role of education and lifelong learning. European Journal of Education, 52(4), 404- 413.

<https://doi.org/10.1111/ejed.12250>

Literacy

Damico, J. S., Baildon, M., & Panos, A. (2020). Climate justice literacy: Stories -we-live-by, ecolinguistics, and classroom practice. *Journal of Adolescent & Adult Literacy*, 63(6), 683-691.

Lohr, M., Meyer, S., & Morrison, D. L. (2021). Building teacher professional learning infrastructure for climate justice education. *Connected Science Learning*, 3(5).

Environmental Education from Primary to 12: Australian Curriculum

Sustainability is a cross-curricular priority.

<https://www.australiancurriculum.edu.au/f-10-curriculum/cross-curriculum-priorities/sustainability/>

Examples

Years 1, 2, 3, 4

Human-Nature World views that recognise the dependence of living things on healthy ecosystems, and value diversity and social justice, are essential for achieving sustainability. **Conservation and Sustainability** Students develop the knowledge, skills, values and world views necessary to contribute to more sustainable patterns of living.

Health and Well-being Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments.

Ontario Curriculum: Environmental Education, 2017 Edition

“The policy framework emphasizes the necessity of ensuring that young people become environmentally active and responsible citizens. Students need to have the knowledge and skills that will enable them to understand and deal with complex issues that affect the environment now and in the future. For example, students need to develop skills in problem solving, inquiry, decision Preface 3 making, action planning, higher-level thinking, systems thinking, and critical literacy. They also need to be able to identify issues and perspectives, carry out research, and communicate their ideas in meaningful ways. To help achieve this goal, the Ministry of Education has ensured that **environmental education is included in all grades and in all subjects of the Ontario curriculum, as appropriate.** Expectations that relate directly to environmental education as well as expectations that encompass opportunities for learning about the environment are now embedded in the curriculum. The scope and sequence resource guides for Kindergarten to Grade 8 and Grades 9 to 12 identify these embedded expectations with the aim of assisting teachers in bringing environmental education into the classroom in every subject area and discipline. (p.2-3)

http://www.edu.gov.on.ca/eng/curriculum/elementary/environmental_ed_kto8_eng.pdf

http://www.edu.gov.on.ca/eng/curriculum/secondary/environmental_ed_9to12_eng.pdf

Greening the Way Ontario Learns

http://www.edu.gov.on.ca/eng/teachers/enviroed/pdfs/A_12_Greening_the_Way_Ontario_Learns_Prese

[ntation.pdf](#)

[Holistic Approach](#)

<https://equinoxschool.ca/faq/>

SEPN The Sustainability and Education Policy Network

<https://sepn.ca/the-project/>

https://sepn.ca/research_results/policy-brief-k-12-environmental-certification-programs/

EPA

https://cdn.naaee.org/sites/default/files/eeepro/products/files/k-12_ee.lr_.pdf

https://cdn.naaee.org/sites/default/files/learnerguidelines_new.pdf

BC Curriculum: Place-based Learning

<https://kbee.ca/handbook/>

The Kootenay-Boundary Environmental Education Initiative (KBEE) is coordinated by a committee of the Kootenay-Boundary Chapter of the British Columbia School Superintendents Association (BCSSA). This includes School Districts 5, 6, 8, 10, 20 and 51. The goal of the KBEE to better support students' understanding of their local environment and empowering thoughtful action, through learning that is outdoor, experiential, place-based and place-conscious.

Background References

Susan M. Drake and Rebecca C. Burns. Meeting Standards Through Integrated Curriculum

<http://www.ascd.org/publications/books/103011/chapters/What-Is-Integrated-Curriculum%C2%A2.aspx>

Mi'kmawe'l Tan Teli-kina'muemk: Teaching about the Mi'kmaq Tim Bernard, Leah Morine Rosenmeier and Sharon L. Farrell, editors ©2015 The Confederacy of Mainland Mi'kmaq, Truro, Nova Scotia P.O. Box 1590 Truro, NS, Canada B2N 5V3 www.cmmns.com

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Neaman A, Otto S, Vinokur E. **Toward an Integrated Approach to Environmental and Prosocial Education.** *Sustainability.* 2018; 10(3):583. <https://doi.org/10.3390/su10030583>

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Outdoor Learning Spaces

Quay, J., Gray, T., Thomas, G. *et al.* What future/s for outdoor and environmental education in a world that has contended with COVID-19?. *Journal of Outdoor and Environmental Education* **23**, 93–117 (2020). <https://doi.org/10.1007/s42322-020-00059-2> <https://rdcu.be/cgBzp>

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Inclusive Education and Equity

Whitley, J., Hollweck, T. Inclusion and equity in education: Current policy reform in Nova Scotia, Canada. *Prospects* 49, 297–312 (2020). <https://doi.org/10.1007/s11125-020-09503-z>

Research on Benefits and Process for Greening Schoolyards

Bates, C. R., Bohnert, A. M., & Gerstein, D. E. (2018). Green schoolyards in low-income urban neighborhoods: natural spaces for positive youth development outcomes. *Frontiers in psychology*, 9, 805.

Canadian Biodiversity Institute: <http://www.schoolgrounds.ca/questions.html>

Dyment, J. E. (2005). Green school grounds as sites for outdoor learning: Barriers and opportunities. *International Research in Geographical & Environmental Education*, 14(1), 28-45.

Evergreen School Yard Greening Resource Guide:

<https://www.evergreen.ca/downloads/pdfs/School-Ground-Greening-Policy-Planning.pdf>

Leung, W. T. V., Tam, T. Y. T., Pan, W. C., Wu, C. D., Lung, S. C. C., & Spengler, J. D. (2019). How is environmental greenness related to students' academic performance in English and mathematics?. *Landscape and Urban Planning*, 181, 118-124.

Toronto study- students involved in planning process for new schoolyard

<https://www.evergreen.ca/blog/entry/placemaking-with-children-getting-students-involved-in-the-planning-process/>

The Urgent Case for Green Schoolyards after Covid

SARAH MILLIGAN-TOFFLER AND RICHARD LOUV, FINDING NATURE NEWS, CHILDREN & NATURE NETWORK OCTOBER 2020:

<https://www.childrenandnature.org/resources/the-urgent-case-for-green-schoolyards-during-and-after-covid-19/>

National Research Project in the States

Stevenson, K. T., Moore, R., Cosco, N., Floyd, M. F., Sullivan, W., Brink, L., ... & Zaplatosch, J. (2020). A national research agenda supporting green schoolyard development and equitable access to nature. *Elementa: Science of the Anthropocene*, 8(1).

<https://online.ucpress.edu/elementa/article/8/1/406/115879/A-national-research-agenda-supporting>

-green

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