



Preschool–Grade 12 Teachers

This section is for individuals and organizations that support, deliver, or provide environmental and sustainability education to educators currently teaching (in-service) or preparing to teach (pre-service) in the formal, traditional, or non-traditional education system, from pre-kindergarten through to grade 12.

Outcomes

Preschool–grade 12 teachers will:

1. Become part of an educational commitment to environmental and sustainability education and **ecological literacy**

Sample Indicators:

- They acquire a sound understanding of ecological concepts, principles, and issues.
 - They are able to plan collaboratively and integrate **environmental education** across all disciplines.
 - They are able to use the outdoors effectively as a teaching environment.
 - They are supported by an increasingly environmentally aware public and parental community.
 - They recognize the environmental implications of investment choices for teachers' pension funds.
2. Access the professional development and high-quality, current resources needed to teach environmental issues and ecological concepts

Sample Indicators:

- Ontario education policy makes E&SE a required “teachable” towards teaching certification.
- Faculties of education introduce E&SE programs and courses, and hire faculty members qualified to train student teachers in the area of **ecological literacy**.
- Teachers benefit from comprehensive pre-service training and accreditation in E&SE.



- In-service teachers attend workshops, summer institutes and conferences that provide training for integrating ecological concepts and environmental issues across disciplines.
 - Teachers are trained to find, and are provided with good access to materials and activities on environmental issues and ecological concepts that are current, scientifically accurate, developmentally appropriate, and **bias-balanced**.
3. Teach effectively to provide students with a sound understanding of and ability to apply ecological concepts

Sample Indicators:

- Teachers make regular use of curricula that include ecological concepts and environmental issues, and use E&SE to deliver curriculum requirements as a particular focus, and across subject areas.
 - They apply concepts such as **ecological thinking** (or **systems thinking**), **sustainability**, **stewardship**, **sense of place**, environmental costs and benefits, **participatory democracy**, and the **precautionary principle**.
 - Their teaching reflects the **holistic** nature of the environment and its complex relationship to society, technology, and the economy.
 - Their teaching includes a focus on the relationships between environmental health and human health.
 - They provide students with opportunities to develop skills of inquiry, communication, problem solving, decision-making, and informed participation in addressing environmental issues.
 - They appreciate, understand, and discuss the importance of innovation and ingenuity, in both technological design and business, for advancing sustainable communities.
 - They provide experiences in outdoor environments that enhance students' knowledge of and connection to the "real" world outside the school, which includes the natural world.
 - They collaborate and share their experience and expertise with other educators through workshops, professional organizations, and publications.
 - They involve students in working towards environmentally friendly schools.
 - They use **holistic** educational approaches to investigate environmental values.
4. Guide students to become environmentally knowledgeable, ethical, responsible, and literate citizens

Sample Indicators:

- They teach students to assess the ecological and **sustainability** implications of everyday choices and behaviours.
- They invite a critical analysis of products and consumption, and their implications for ecological and economic **sustainability**.
- They provide opportunities to discuss and build an understanding of the major long-term economic and technological changes required to create a truly sustainable economy.
- They model and teach the use of environmentally friendly, sustainable practices in the classroom and the school community.
- They initiate or work with environment clubs and school and community environmental projects.



- They teach students how to become environmentally responsible citizens.
 - Students are ecologically literate, well informed on major environmental issues, and able to make ecologically responsible choices for their lives and their future, both personally and professionally.
5. Work towards whole school involvement in environmental **stewardship** and institutional greening

Sample Indicators:

- Schools practice what they teach, through environmental policy and institutional greening (e.g., develop coordinated, annual environmental plans, including waste reduction and recycling, energy conservation, and school ground greening).
- They plan curriculum-based lessons that include learning about the ecological advantages of their school environmental plan (**ecological literacy**).
- They make indoor and outdoor learning environments more conducive to and supportive of E&SE; they engage in greening initiatives which support environmental **stewardship** and build a **sense of place**.
- Principals and administrators support regular school involvement in environmental learning and practical, hands-on, environmental activities.
- School boards and systems recognize the economic advantages to be achieved in conjunction with environmental conservation efforts (e.g., reduced energy costs, lower consumption, cooler schools with additional trees and green roofs).
- There are observed changes in acceptance of environmental behaviour in the school and community.

Needs

Preschool–grade 12 teachers need:

- Recognition that education is the key to addressing environmental and sustainability issues
- Basic knowledge of ecological principles, natural systems, environmental issues, and the interactions of the environment with society, technology, and the economy
- Training to make best use of environmental and **sustainability** content in the existing Ontario curriculum
- Development of enhanced E&SE in the Ontario curriculum, including a specific, focused, spiral curriculum for every grade from preschool to university
- Legislation and educational policies to support the inclusion of curriculum to advance **ecological literacy**
- Collaboration among the Ontario Teachers’ Federation, the Ministry of Education, and the Ontario College of Teachers to provide programs and training, as well as mentoring for E&SE
- Public pressure on government and politicians for E&SE and outdoor education, including the preparation and training of teachers
- Comprehensive pre-service training and accreditation in E&SE that will enable all teachers to teach ecological principles and environmental issues; plan and integrate E&SE collaboratively across all disciplines; and use the



- outdoors effectively as a teaching environment
- Consistency in the approach to E&SE in undergraduate programs and faculties of education
- Time and funding for effective in-service training: professional development, workshops, summer institutes, and conferences in E&SE
- Appropriate, quality resources (e.g., materials, technology, consultant expertise, model programs, and best practices) for teaching and learning that are credible, accessible, current, appropriate, and affordable
- Coordinated environmental plans for schools, including annual goals and objectives, and curriculum-connected lessons and projects for classrooms
- Access to outdoor education facilities, programs, and personnel to reinforce teachers' knowledge and skills, and to help them provide effective environmental lesson planning and learning
- Improved communication and outreach among teachers, E&SE providers, resource people; opportunities for sharing, collaborating, reflecting, and networking
- The willingness and the ability to present controversial aspects of environmental issues and discuss different points of view
- Consensus building and conflict resolution skills for dealing with differing points of view regarding environmental issues and societal, community, and parental values
- Easy access, in isolated communities, to **environmental education** resources and technology
- Staff for weekend pre-planning sessions
- Recognition—by students, parents, school administrators, teacher federations, governing bodies, and government officials—of their commitment to **environmental education** as a basic and critical component of education
- Recognition by others for teachers' commitment, excellence, and achievement in E&SE
- Ongoing support from principals, school boards, and government ministries
- A high profile champion of E&SE, with power and political clout

Strategies

Programs, Projects, and Policies

1. Develop education policy and curriculum that recognize E&SE as a key element in addressing environmental issues.
2. Mandate E&SE as a required program, with legislation in place to ensure the sustainability of programs.
3. Make E&SE part of the funding formula of school boards.
4. Establish graduation standards for E&SE and **ecological literacy**.
5. Establish teacher training and certification for **ecological literacy** and education:
 - a) draft provincial education policy that makes E&SE a required "teachable" towards teaching certification;
 - b) introduce E&SE programs and courses into faculties of education, and hire faculty members or instructors qualified to train student teachers in E&SE;
 - c) establish a minimum requirement for environment related studies for entry into any faculty of education program;



- d) require some professional learning credits for certification to be environmentally focused;
 - e) add E&SE as a core category of the Ontario College of Teachers' **Professional Learning Program**;
 - f) develop pre-service programs at faculties of education that include preparation for specialist certification in E&SE, and preparation for teachers in all disciplines to integrate E&SE into their own disciplines and across other disciplines;
 - g) include—in pre-service programs—preparation in outdoor education and the use of resources such as school properties, local environments, parks, zoos, and other off-site facilities;
 - h) provide in-service workshops, summer institutes, and conferences to provide training in the integration of ecological concepts and environmental issues, both as a focus and as concepts to be integrated into particular disciplines, and across disciplines; and
 - i) mandate outdoor education and its facilities, programs, and personnel to ensure access to outdoor education by teachers and students, and provide teachers with skills as environmental educators.
6. Organize the learning process around environmental themes chosen in consultation with students, who are given as much responsibility as they can cope with.
 7. Include the **environmental literacy** of staff and students in the mission statements and goals of boards of education and schools.
 8. Partner with organizations, companies, groups, associations, and individuals supportive of E&SE, in its many forms, to eliminate barriers to its advancement.
 9. Organize special events and hands-on projects that teach about and restore the environment.
 10. Create environmental workplace programs.
 11. Create a multimedia, public campaign for E&SE.
 12. Collaborate with teachers' associations to work towards
 - a) a review process for the Ontario Teachers' Pension Fund to invest responsibly for social and environmental **sustainability**; and
 - b) revisions to the Ontario Teachers' Pension Act which would allow for increased transparency on investment choices, and increased ability by teachers to direct funds to support socially and environmentally responsible investments.



Resources

1. Create and support a central website clearinghouse/learning exchange to provide educators and learners with convenient access to quality E&SE resources.
2. Initiate and fund the creation of quality environmental resource materials.
3. Gather and provide information about model E&SE policies and programs, best practices in teaching and learning, and guidelines for excellence in materials, resources, speakers, and organizations (e.g., the **Professional Learning Program**) that can help deliver pre-service and in-service training.
4. Create partnerships with the Ministries of Environment and Natural Resources, non-governmental organizations, business, the community, and facilities such as zoos, parks, and museums to share expertise



- and resources, and to support growth in teachers' knowledge and skills in E&SE.
5. Build networks of E&SE coordinators and consultants at the provincial and local levels to
 - a) collaborate with, support, and mentor teachers in the development of **ecological literacy**;
 - b) facilitate environmental and **sustainability** programs and activities; and
 - c) link educators with community organizations, outside partners, and expertise.
 6. Ensure that all educators and schools have access to environmental and **sustainability** programs and resources, including those with distance or local funding constraints.
 7. Provide environmental resources that include Aboriginal perspectives on respecting and living on the land.
 8. Provide funding for **environmental education** resources for education professional libraries.
 9. Set environmental and **sustainability** content requirements for new textbooks.
 10. Develop environmental and **sustainability** resources for teachers who teach special programs (e.g., English as a second language, French, gifted, the arts).

Support

1. Recognize the United Nations' and Canadian commitments to **Agenda 21** (Chapter 36) to increase and improve E&SE training.
2. Create a cogent, coordinated, high profile approach to garnering support for E&SE in Ontario.
3. Establish coordinated funding for the formal support of **ecological literacy** from all levels of government—federal, provincial, and local—as well as foundations and other private sources.
4. Provide policy, funds, and programming for pre-service training in E&SE.
5. Provide funds and supply teacher coverage for in-service professional development in E&SE (e.g., workshops, summer institutes, and conferences).
6. Maintain outdoor education facilities, programs, and personnel to ensure access to outdoor education by teachers and students.
7. Provide time and opportunities for teachers to become involved in curriculum writing, collaborative planning, and school and community environmental committees and projects.
8. Promote research into the efficacy of **environmental education**, methods, and best practices, as well as the effects of **environmental education**.
9. Provide local “support and share” meetings for educators.
10. Create an E&SE advisory board for the province of Ontario that includes senior managers and people with decision-making authority or funding potential.
11. Elaborate a well-funded communications strategy that defines what E&SE is, its importance in protecting the environment, and good news stories about how E&SE is being done.
12. Recognize and present awards to teachers, administrators, and boards of education for excellence in E&SE achievements and practices. Publicize their successes.

Please see Appendix 1 for a list of useful websites.

