Education for Sustainable Development (ESD)

Anne MacDiarmid- ESD Consultant K-12
Importance of ESD
Mission
• To ensure that all Manitoba’s children and youth have access to an array of educational opportunities such that every learner experiences success through relevant, engaging and high quality education that prepares them for lifelong learning and citizenship in a democratic, socially just and sustainable society.

Vision
• That every learner will complete a high school education with a profound sense of accomplishment, hope and optimism.

Overarching Goals
• To ensure education in Manitoba supports students experiencing and learning about what it means to live in a sustainable manner.
• To ensure that education practice and policy in Manitoba is guided by the principle of inclusion.
• To significantly increase achievement levels of those students who have been historically less successful.
• To continue to increase the overall provincial graduation rate.

Priority Action Areas
• Numeracy and Literacy
• Education for Sustainable Development
• Education in Low-income Communities
• Aboriginal Education
• Education in Rural Manitoba
• Education in Northern Communities
Manitoba Education and Advanced Learning has been encouraging a whole-school approach to sustainability. This means that the strategy of the institution, and ultimately its culture, is oriented towards sustainable development.

- A whole school approach refers to the infusion of sustainability across the curriculum (e.g. teaching, learning and research)
- through facilities and operations (e.g. reducing its ecological footprint),
- in its capacity building efforts (e.g. providing training to staff), governance (e.g. sustainable school plans and policies)
- and through partnerships (e.g. reaching out to the community).
- The activities found within this approach may vary within school/school divisions, in order for it to be locally relevant.
Sustainable School Plans

encouraging schools to have sustainable school plans by 2015

• Annually integrated into the existing school plan
• Or can be a separate sustainable school plan

* Each school could have a unique plan relevant to their students and community*
School Plan Document

- **Expected Outcomes** - What specifically are you trying to improve for students?
- **Indicators** - How will you know you are making progress?
- **Strategies** – What actions will you take?
- **Data Sources** - How will you collect evidence of progress?
Governance
1.1 Policy
1.2 Decision Making
1.3 Finance and Budgeting
1.4 Monitoring and Evaluation

Curriculum, Teaching, and Learning
2.1 Curriculum and Resources
2.2 Teaching / Pedagogy
2.3 Learning Environments

Human Capacity Building
3.1 Leadership
3.2 Professional Development
3.3 Human Resources

Facilities and Operations
4.1 Facilities
4.2 Operations

Partnerships
5.1 Parent and Community Partnerships
5.2 Learning
Manitoba’s ESD Vision

Students will

• Be informed and responsible decision-makers
• Play active roles as citizens of Canada and the world
• Contribute to social, environmental, and an equitable quality of life for all, now and in the future.
“The overall goal of the Decade for ESD (2005-2014) is to integrate the values inherent in sustainable development into all aspects of learning to encourage changes in behavior that allow for a more sustainable and just society for all.”

UNESCO, 2006
Values and principles

• Despite the variety of religions and cultures around the world, we all share common beliefs about the need to care for other people and the natural environment.

• Such beliefs are essential to a sustainable future.
  • http://www.unesco.org/education/tlsf/mods/theme_c/mod10.html
UNECE Steering Committee on ESD

March 2012

Gerald Farthing chairs this committee - CMEC

3 priorities

• to ensure that every school has an ESD school plan by 2015

• to promote the introduction of ESD into teacher education

• to reorient technical and vocational education and training in support of sustainable development and the transition to a green economy.

Manitoba Education has aligned our ESD focus with these priorities.

Manitoba Education

Education for Sustainable Development
To build on Manitoba's reputation as a leader in ESD, the province has:

- Launched **Global Issues: Citizenship and Sustainability** to promote active democratic citizenship, ecological literacy, critical media literacy and ethical decision-making

- Created Canada's first **Education for Sustainable Development-Leadership Council** comprised of school boards, teachers, parents and post-secondary institutions-creating the **ESD Action Plan**

- Supported a goal of encouraging every school in Manitoba to have a **sustainable school plan by 2015**
### Enduring Understandings

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Our ecological footprint is exceeding Earth’s capacity to</td>
<td>Minimize your ecological footprint, and live more responsibly</td>
</tr>
<tr>
<td>sustain biodiversity and human life.</td>
<td>(e.g., use fewer non-renewable resources; reduce waste; limit</td>
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<td></td>
<td>dependence on petrochemicals; seek sustainable and ethical</td>
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<td></td>
<td>food choices...).</td>
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<td>Our decisions and actions matter; they have social,</td>
<td>Recognize the consequences of your decisions, and take action</td>
</tr>
<tr>
<td>environmental, economic, and political consequences.</td>
<td>as a citizen for a sustainable and just future for all.</td>
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<tr>
<td>Individuals, groups, governments, and corporations</td>
<td>Be an ethical decision-maker, take a stand to support quality</td>
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<tr>
<td>have the power to effect change and the responsibility</td>
<td>of life for all, and challenge the unethical and the</td>
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<tr>
<td>to contribute to a sustainable future.</td>
<td>unsustainable.</td>
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<tr>
<td>The media do not provide neutral reflections of reality;</td>
<td>Evaluate the purposes of media, critically question information</td>
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<tr>
<td>they affect our decisions and actions.</td>
<td>sources and our responses to media, and make decisions</td>
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<tr>
<td>A global economic system that depends upon and</td>
<td>Make consumption decisions that follow ecological and ethical</td>
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<tr>
<td>perpetuates unrestrained consumerism is unsustainable.</td>
<td>principles, and be respectful of nature, self, and society in</td>
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<tr>
<td>Economic and technological development has contributed</td>
<td>your actions.</td>
</tr>
<tr>
<td>greatly to society, but often with harmful human and</td>
<td>Assess the relative value and sustainability of economic and</td>
</tr>
<tr>
<td>environmental consequences.</td>
<td>technological developments in order to make informed</td>
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<tr>
<td>Indigenous knowledge and world views offer alternatives to</td>
<td>decisions.</td>
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<tr>
<td>prevailing assumptions about how to live with one another</td>
<td>Explore indigenous perspectives to extend the boundaries</td>
</tr>
<tr>
<td>within the environment.</td>
<td>of the familiar and to challenge assumptions and practices.</td>
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<tr>
<td>Political systems distribute power, privilege, and wealth</td>
<td>Support democratic citizenship and be vigilant about political</td>
</tr>
<tr>
<td>in different ways, some more justly than others.</td>
<td>decisions that affect social, economic, and environmental</td>
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<td>A just society respects human diversity and recognizes</td>
<td>conditions.</td>
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<td>universal, equal, and inalienable human rights.</td>
<td>Be committed to universal human rights, regardless of gender,</td>
</tr>
<tr>
<td>There is no them or over there: we all belong to the</td>
<td>age, physical ability, sexual orientation, language, culture,</td>
</tr>
<tr>
<td>human species, our concerns are interdependent, and we are</td>
<td>religion, political beliefs, ethnicity, national or social</td>
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<tr>
<td>part of the natural world.</td>
<td>origin, or status (e.g., property, birth, economic...).</td>
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<td></td>
<td>Uphold the value of every person and strive to build</td>
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<td>community; act in ways that acknowledge human solidarity and</td>
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<tr>
<td></td>
<td>the complexity and interrelatedness of all life.</td>
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</table>
What is Sustainable Development?

“Sustainable Development can be defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs”

World Commission on Environment and Development, 1987

There are some things in the world we can't change - gravity, entropy, the speed of light, and our biological nature that requires clean air, clean water, clean soil, clean energy and biodiversity for our health and well being. Protecting the biosphere should be our highest priority or else we sicken and die. Other things, like capitalism, free enterprise, the economy, currency, the market, are not forces of nature, we invented them. They are not immutable and we can change them. It makes no sense to elevate economics above the biosphere.

~David Suzuki~
Our well-being is tied to the health of our planet …

• Our well-being is not secure unless the environment is protected

• Our future is bound up with other people and places and we cannot all have a good quality of life in a world with poverty, inequality, war and poor health

End -Means Spectrum

Herman Daly

- **Ultimate Ends** - love, fulfillment, family

- **Intermediate Ends** - food, water, shelter, work

- **Intermediate Means** - books, tools, buildings, capitol

- **Ultimate Means** – air, water, food, resources
3-Nested-Dependencies Model

Based on Bob Doppelt, *The Power of Sustainable Thinking*; Peter Senge et al., *The Necessary Revolution*. 

- Environment
  - Society
    - Economy
Schools have a special role to play in preparing students to build a better future

• Help students understand their impact on the planet and each other and to consciously choose more sustainable behaviours

• e.g. management of energy, water, waste biodiversity, school yard design, procurement-facilities, social justice

As educators -

- We are in a position to emphasize the cause and effect of our actions to ensure long term sustainability
- By immersing students in a learning environment that puts ESD president, students can adopt a culture that shapes their thinking and understanding.
- Eco Globe Transformation Schools

Manitoba Education
Education for Sustainable Development
Crestview School – Eco Globe Transformation 2012

• They used the Sustainable Happiness resource by Dr Catherine O’Brian to develop their culture of sustainability.
Sustainable happiness takes into account that happiness is interconnected with other people, other species, and the natural environment by a remarkable web of interdependence.

This means that our daily actions and decisions contribute to—or detract from—our own well-being, and that of others.

Sustainable happiness can lead to a more sustainable lifestyle and greater life satisfaction.
1. Cultivate Appreciation
   • According to happiness experts, gratitude and appreciation are associated with happiness and life satisfaction.

2. Embrace your Natural Highs
   • Natural highs are natural, everyday things that are found right under your nose, like the fragrance of a rose garden.

3. Chart Your Sustainable Happiness Footprint
   • Take a snapshot of a typical day with a Sustainable Happiness Footprint Chart.

Sustainable Happiness Footprint Chart.
# Sustainable Happiness Footprint Chart

Choose one day this week to create your own log of activities. Fill in as much detail as you can. The Sample Chart gives you a sample of what you might write. You may complete more than one day if you wish. Remember to answer the question below as well.

**Sample Chart**

<table>
<thead>
<tr>
<th>TIME</th>
<th>ACTIVITY</th>
<th>EMOTIONAL EXPERIENCE</th>
<th>IMPACT ON SELF</th>
<th>IMPACT ON OTHERS</th>
<th>IMPACT ON NATURAL ENVIRONMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Breakfast – coffee, toast, cereal</td>
<td>-rushed, distracted, thinking about day</td>
<td>- didn’t taste the food, fairly healthy meal, could have chosen whole wheat bread</td>
<td>- coffee was fair trade coffee so positive for coffee workers; bread from farmers’ market, good for local producers; cereal, not sure</td>
<td>Fair trade coffee, care taken for environment -bread – made locally so not transported very far - cereal – highly processed and transported a long way</td>
</tr>
<tr>
<td>8:40</td>
<td>Carpoooled to class/work</td>
<td>Enjoyed talking with friends</td>
<td>-less expensive; less stress than driving alone; feel good about it</td>
<td>-pretty good re. air quality; would be better to be able to cycle or walk</td>
<td>-better than driving alone but still my best option given where I live</td>
</tr>
</tbody>
</table>
Sustainable Happiness

Dr. Catherine O’Brian- http://www.yesmagazine.org/happiness/sustainable-happiness-6-ways-to-get-there

4. Create an Interdependence Map
   • Is there one thing that I could change that would lead to sustainable happiness? Even one shift has ripple effects in the world.

5. Make Your Own "Happy List"
   • Ask yourself if anything on your list is detrimental to you, someone else, or the environment

6. Value Genuine Wealth
   • Genuine wealth is found in relationships, natural beauty, and an appreciation for life, loving, and laughing.
   • How are you contributing to the genuine wealth of other people or your community? Is there anything more that you would like to do?

Manitoba Education
Education for Sustainable Development
Teacher's Guide for:

International Version

Alberta
British Columbia
Manitoba
New Brunswick [En] [Fr]
Newfoundland and Labrador
Northwest Territories*
Nova Scotia
Nunavut*
Ontario [En] [Fr]
Prince Edward Island
Quebec
Saskatchewan
Yukon
Version française
Sustainable Happiness

Dr. Catherine O’Brien  http://www.yesmagazine.org/happiness/sustainable-happiness-6-ways-to-get-there

• To download Sustainable Happiness and Health Education for Manitoba- K to grade 6  
http://sustainablehappiness.ca/teachers

• For more information on exploring sustainable happiness: 
  sustainablehappinesscourse.com.
A sustainable school integrates:

- High standards of achievement
- Engaging relevant learning
- Healthy living
- Environmental stewardship
- Community engagement
- Citizenship
There is a commitment to care for:

**Oneself** - our health and well-being

**Each other** - and all life forms across cultures, generations and locations

**The Biosphere** - locally and globally

A Sustainable School prepares students for a lifetime of sustainable living through-

• Teaching approaches
• Culture of the school
• Daily practices
In 2010 Grosvenor School began a 3 year journey learning about human rights “to help their students better understand and make sense of the world”

They did this by honoring the past, questioning the present and building the future. 2010 to 2012

This multi year inquiry engaged all the staff and students, was interdisciplinary and multi media

Students took action, both local and global as they began to look beyond themselves and engage with others across borders of geography, politics, culture, religion and language.

They developed positive attitudes about global solidarity, peace, tolerance, multiculturalism, environmental awareness and social justice.
New 3 year journey

• Year 1 “Seedlings….Enough for All, For Everyone ,Forever”
• Year 2 is the "Nurturing of the Seed" – the big picture focus will be about taking care of our planet and its resources
• Year 3 will the "The Harvest" , a celebration of the learning over the last 6 years at the Canadian Museum For Human Rights
Guide for Sustainable Schools

Manitoba Education
Education for Sustainable Development
Whole School Approach to SD

- Explore sustainability through curriculum
- Experiential learning-student engagement
- Continuous cycle of planning, implementing and reviewing approaches to sustainability
- Monitor and report on progress
- Developing values that support a sustainability ethos
Guide for Sustainable Schools

- Active student involvement in all stages
- Active participation by all staff, parents etc
- A holistic perspective that employs an integrated systems approach to planning
- Long term vision
- Incorporating sustainability into the whole school planning process
Process

- **Team Building**—who will be on your team? (Admin, students, teachers)
- **Identify**—what is already happening in the school/division
- **Expand and Educate**—involve others and support their understanding
- **Build a Vision**—what are the shared vision(s) of the school/division
- **Plan**—to implement your vision- 1, 3, 5, 10 years..
- **Evaluate**—to ensure you are making a difference

Manitoba Education
Education for Sustainable Development
<table>
<thead>
<tr>
<th>Priority</th>
<th>Strategies</th>
<th>Curriculum Connections</th>
<th>Expected Outcomes</th>
<th>Timeframe / Deadline</th>
<th>Indicators</th>
<th>Data Collection</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>What actions will you take? Who is responsible?</td>
<td></td>
<td>What specifically are you trying to improve? (Observable, measurable)</td>
<td></td>
<td>How will you know you are making progress?</td>
<td>By what means will you collect evidence of progress?</td>
<td>Status, data or anecdotal evidence</td>
</tr>
</tbody>
</table>

*Perhaps start with just one priority issue...*
ESD in Manitoba Curriculum

- Knowledge
- Skills
- Values /Attitudes
- Behaviour /Action

Students should explore in order to work toward a sustainable future.

- The evaluation section provides strategies to assess the effectiveness of actions.
- The document is divided into the 3 levels of schooling; Early Years -Middle Years -Senior Years
ESD in Manitoba Curriculum

Early Years: Kindergarten to Grade 4

Knowledge: (K-4) The learning outcomes in the curriculum for each subject area have been used to build this broad knowledge concept area. The curriculum guides and correlation charts provide specific ESD outcomes for each grade level.

- Develop connections to natural systems, life cycles, diversity of living things
- Explore how natural and built environments influence their daily life
- Discover conditions that support change and growth in animals and plants
- Examine the effects of altering natural systems, environments, and ecosystems, and explore changes these create in other parts of the system
- Identify human needs and wants, responsibilities, and basic rights in a community both local and global, respect rights of others when using personal power or authority
- Connect to family, friends, relationships, sense of place
- Understand the concepts of diversity, citizenship, democracy, and sustainable happiness
- Explore ways to be safe, have a healthy lifestyle, good nutrition and incorporate active living

Skills: K-4

- Assess the well being of an environment by observing, sampling, using past data and making future projections
- Define how living organisms (plants and animals) interact with the human environment and the effects of weather, air and water in these systems
- Spend time outdoors connecting to nature, gardening, understanding how they belong in Earth’s natural systems.
- Distinguish between needs and wants and how the impact of media and culture can...
Skills: Kindergarten - Grade 4

- Assess the well being of an environment by observing, sampling, using past data and making future projections.
- Define how living organisms (plants and animals) interact with the human environment and the effects of weather, air and water in these systems.
- Spend time outdoors connecting to nature, gardening, understanding how they belong in Earth’s natural systems.
- Distinguish between needs and wants and how the impact of media and culture can influence consumption.
- Develop systems for managing waste and consumption, recycling, composting and re-think current consumption patterns (energy, water, ”stuff” etc).
- Demonstrate ways to replenish plants, restore soils, care for living things, protect water quality.
- Develop a sense of self worth and well-being, understand their roles and responsibilities, and set goals.
- Provide strategies and take responsibility for, leading a physically active and healthy life.
- Communicate effectively with others in addition to using a variety of media.
Attitudes/Values: K - 4

- Illustrates care, concern and responsibility for the environment, understanding how fragile it is and how all life forms depend on a healthy environment
- Appreciates how traditional indigenous knowledge contributes to our understanding of plant and animal populations and interactions
- Recognize how their actions can impact present and future generations
- Appreciate that individually and collectively they can create change in themselves, in their community or across a system
- Accepts the responsibilities that are part of a sustainable lifestyle and participates in change
- Appreciate and respects the natural environment while participating in physical activity.
- Appreciates the beauty in nature.
- Respects others, their cultures and recognizes the interdependence of human communities with natural systems
- Respects and values human diversity in our multi-cultural society and world.
- Values mutual respect and kindness

Take Action: K - 4

- Protect the resources and the health of our planet, as all life forms depend on them
- Take an active role in the classroom, school and community to affect change and minimize negative impacts on future generations
- Discuss “why I care” and “why we should do this” with regard to sustainability
ESD in Manitoba Curriculum

Evaluation: K- 4

- Record observations of behaviours and actions students undertake
- Critique the process students used to implement change
- Assess the impact of students’ actions, feedback from others and how the action enhanced sustainability
- Reflect on how student actions impacted learning, understanding and changed behaviour
Planning a sustainable school

Driving school improvement through sustainable development

department for children, schools and families
Australian –Sustainability Curriculum Framework

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