BACKGROUND

The *Resources for Rethinking Review Tool* was created through a collaborative process that began with the work of "Green Street". Since we began this project in 2006, over thirty classroom teachers from across Canada have been trained to use the tool to review resources and have contributed to the tool's evolution. Through ongoing training and regular quarterly meetings the team continues to develop and improve its expertise on Education for Sustainable Development (ESD).

We are respectfully offering our review of resources as a way to share our learning about Education for Sustainable Development with the larger ESD community and as a way to help teachers to efficiently and effectively bring ESD into their classrooms.

For each resource, we look for matches to 14 sustainability themes (for example: Food and Agriculture, Citizenship, Water, etc.); these themes are based on those used by the United Nations for the Decade for Education for Sustainable Development (2005-2014). We also look for matches to curriculum units in all subject areas in all thirteen provinces and territories in Canada.

Each resource is assessed using nine principles that are particularly relevant to sustainability, and responsible citizenship (for example, Respects Complexity, Bias Minimization, Locally Focused). Each resource is also assessed using eleven principles of good pedagogy (for example, Discovery Learning, Values Clarification, Diverse Learning Styles). In some ways, these twenty different principles make up a 'wish list' of what an excellent Education for Sustainable Development (ESD) teaching resource would include. We recognize that even the best resources may not address all of the principles thoroughly; however, we believe that it is important to assess the resources against all of these principles all of the time[*] in order to encourage the development of exceptional ESD resources.

The assessment page of the review provides further details about important areas of the review (for example: Implicit Curriculum and Null Curriculum) as well as a general summary of strengths, weaknesses and suggestions for improving the resource and an overall rating.

In order to help authors and publishers to understand these sustainability and pedagogy principles, we are creating a 'toolbox' which will contain two-page guides to understanding

---

[*] Some principles are not relevant to resources for very young learners (for example, Multiple Dimensions of Problems and Solutions)

individual principles. We are also happy to provide personal support on the telephone. We are currently seeking funding to offer workshops to ESD stakeholders about what (we have learned) makes for effective ESD, through our academic research and through our intensive work with our team of Canadian teacher-reviewers. We will also provide information about which grades, issues and subject areas have access to good ESD resources and which grades/issues/subject areas have 'gaps' and are in need of good ESD resources.

OVERVIEW OF REVIEW CATEGORIES

Issues & Themes
Which sustainability issues does the resource explore?

Curriculum Matches
How does the resource relate to the curriculum objectives in each of the provinces and territories in Canada?

Sustainability Principles
How well does the resource promote the knowledge, skills, perspectives and practices essential for building ecologically, socially, and economically sustainable communities?

Pedagogical Approaches
How well does the resource foster learning that is active, relevant and interdisciplinary?

General Assessment
From a « big picture » perspective, what are the resource's strengths and weaknesses?

ISSUES & THEMES

THEME	ISSUES
Air, Atmosphere & Climate	• Action Projects Related to the Theme • Acid Rain • Air Pollution • Climate Change • Ozone Depletion

	Citizenship	- Action Projects Related to the Theme - Alternative Globalization - Community-Building & Participation - Ecological Footprint - General Guide to Taking Action - Lifestyle Analysis - Sustainable Consumption - Media
	Economics	- Action Projects Related to the Theme - Alternative Economic Systems - Corporate Social Responsibility - Globalization - Poverty Reduction - Trade
	Ecosystems	- Action Projects Related to the Theme - Appreciating the Natural World - Biodiversity - Bioregionalism - Carrying Capacity - Endangered Species - Habitat Loss - Interdependence - Invasive Species - Wildlife Protection
	Energy	- Action Projects Related to the Theme - Alternative/ Renewable Energy - Energy Use - Energy Generation

	Food & Agriculture	• Action Projects Related to the Theme • Animal Rights • Aquaculture • Biotechnology • Conventional Farming • Food Security • Local Food • Organic Farming • Pesticides • Subsistence Farming
	Governance	• Action Projects Related to the Theme • Democracy • Government Regulations • International Relations
	Human Health & Environment	• Access to Health Care • Action Projects Related to the Theme • Environmental Contaminants and Health Hazards • Health Promotion • HIV/AIDS • Hunger and Malnutrition
	Human Rights	• Action Projects Related to the Theme • Cultural Diversity • Education • Gender Equality • Poverty • Refugees & Immigration • Religious Diversity • Sexual Diversity • Social Justice • War & Peace
	Indigenous Knowledge	• Action Projects Related to the Theme • Rituals, Spirituality & Worldviews • TEK – Traditional Ecological Knowledge

	Land Use & Natural Resources	• Action Projects Related to the Theme • Fisheries • Forests • Habitat Restoration • Planting Indigenous Species • Recreation • Rocks and Minerals • Rural Issues • Sustainable Urbanization • Transportation
	Science & Technology	• Alternative Ways of Doing Science • Analysing Conventional Science • Appropriate Technology
	Waste Management	• Action Projects Related to the Theme • Composting • Cradle-to-Cradle • Hazardous Wastes • Liquid Waste • Rethink Reduce Reuse Recycle • Solid Waste Disposal • Source Reduction
	Water	• Action Projects Related to the Theme • Freshwater Environments • Marine Environments • Privatization & Sale of Water • Water Cycle • Water Quality • Water Treatment & Distribution • Water Use • Watershed Protection

CURRICULUM MATCHES

The *Resources for Rethinking* database links sustainability education resources to specific courses, units, and objectives of the K-12 curricula in every province and territory in Canada.

Curriculum matches are classified as *full* or *partial*.

- Full Curriculum Match: The resource or lesson plan explicitly relates to a given course unit or objective. For example, an easy match to a Grade 10 English unit on debating is made when a debate is not only *held*, but also *explained*.
- Partial Curriculum Match: Adaptations, revisions, or supplementations by the teacher are required in order to fulfill a curriculum unit or objective.

SUSTAINABILITY PRINCIPLES

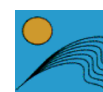| SUSTAINABILITY PRINCIPLE	EXPLANATION
Consideration of Alternative Perspectives	Presents as many different points of view as necessary to fairly address the issue(s). • Satisfactory: absence of bias towards any one point of view • Good: students consider different points of view regarding issues, problems discussed • Very good: based on the consideration of different views, students form opinions and take an informed position
Multiple Dimensions of Problems & Solutions	Effectively addresses the environmental, economic and social dimensions of the issue(s) being explored. • Satisfactory: resource supports the examination of these dimensions • Good: resource explicitly examines the interplay of these dimensions • Very Good: a systems-thinking approach is encouraged to examine these three dimensions
Respects Complexity	The complexity of problems/ issues being discussed is respected.
Acting on Learning	Learning moves from understanding issues to working towards positive change — in personal lifestyle, in school, in the community, or for the planet • Satisfactory: action opportunities are included as extensions • Good: action opportunities are core components of the resource • Very Good: action opportunities for students are well supported and intended to result in observable, positive change
Empathy & Respect for Humans	Empathy and respect are fostered for diverse groups of humans (including different genders, ethnic groups, sexual preferences, etc.).

Personal Affinity with Earth	Encourages a personal affinity with -the natural world. • Satisfactory: connection is made to the natural world • Good: fosters appreciation/concern for the natural world • Very Good: fosters stewardship though practical and respectful experiences out-of-doors
Locally Focused	Includes learning experiences that take advantage of issues/elements within the local community. • Satisfactory: learning is made relevant to the lives of the learners • Good: learning is made relevant and has a local focus • Very Good: learning is made relevant, local and takes place 'outside,' in the community
Past, Present & Future	Promotes an understanding of the past, a sense of the present, and a positive vision for the future.
Values Education	Students are explicitly provided with opportunities to identify, clarify and express their own beliefs/values.

PEDAGOGICAL APPROACHES

PEDAGOGICAL APPROACH	EXPLANATION
Open-Ended Instruction	Lessons are structured so that multiple/complex answers are possible; students are not simply steered toward one "right" answer.
Integrated Learning	Learning brings together content and skills from more than one subject area • Satisfactory: content from a number of different subject areas is readily identifiable • Good: resource is appropriate for use in more than one subject area • Very Good: the lines between subjects are blurred
Inquiry Learning	Learning is directed by questions, problems, or challenges that students work to address. • Satisfactory: Students are provided with questions/problems to solve and some direction on how to arrive at solutions. • Good: students, assisted by the teacher clarify the question(s) to ask and the process to

	follow to arrive at solutions. Sometimes referred to as Guided Inquiry • Very Good: students generate the questions and assume much of the responsibility for how to solve them. . Sometimes referred to as self-directed learning.
Differentiated Instruction	Activities address a range of student learning styles, abilities and readiness. • Satisfactory: includes a variety of instructional approaches • Good: addresses the needs of visual, auditory & kinesthetic learners • Very Good: also includes strategies for learners with difficulties
Experiential Learning	Authentic learning experiences are provided • Satisfactory: learning is made concrete. 'Working with real objects, using real sources of information • Good: learning takes place in a real-world context. Simulation, mentorship • Very good: learning provides experience beyond the classroom. Addressing real world issues and problems
Co-operative Learning	Group and cooperative learning strategies are a priority. • Satisfactory: students work in groups; • Good: cooperative learning skills are explicitly taught and practiced • Very Good: cooperative learning skills are explicitly taught, practiced and assessed
Assessment & Evaluation	Tools are provided that help students and teachers to capture formative and summative information about students' learning and performance. These tools may include reflection questions, checklists, rubrics, etc.
Peer Teaching	Provides opportunities for students to actively present their knowledge and skills to peers and/or act as teachers and mentors. • Satisfactory: incidental teaching that arises from cooperative learning, presentations, etc.; • Good or Very Good: an opportunity is intentionally created to empower students to teach other students/community members. The audience is somehow reliant on the students' teaching (students are not simply 'presenting')
Case Studies	Relevant case studies are used. Case studies are thorough descriptions of real events in real situations that can be used to examine concepts in an authentic context.
Locus of Control	Meaningful opportunities are provided for students to choose elements of program content, the medium in which they wish to work, and/or to go deeper into a chosen issue.

GENERAL ASSESSMENT

CRITERION	EXPLANATION
Skill-Building	What skills does this resource explicitly teach? For example: analyzing one's ecological footprint, detecting bias, building consensus, controlling variables, writing letters, presenting, etc.
Strengths & Weaknesses	Provide highlights from the Sustainability Education and Pedagogical Approaches charts. Also, consider addressing the following questions: • Is the resource interesting? • Is there a good quantity and quality of background information for the teacher? • Is there a good quantity and quality of background information for the student? • Is the resource thorough and easy to use? • Is support offered to teachers? • Is the package up-to-date?
Overall Rating	Would you recommend this resource? • Yes • Yes, with qualifications • No
To Enhance This Resource...	• The following changes are necessary: • The following changes would be beneficial:
Recommendation of how and where to use it	Tips and suggestions provided by the reviewer on the use of this resource.