

RESOURCES

Manitoba Education

Sustainable development concepts can be integrated into the curriculum for the following subject areas:

- Social studies
 - Science
 - Physical education/health education
 - English language arts
- Mathematics
 - Arts education
 - Technology education

Each subject area has specific learning outcomes and suggested teaching approaches. Links to curricula and resources for each subject area are provided in the chart below.

Curricula	Website
Sustainable Development*	www.edu.gov.mb.ca/k12/esd/index.html
Social Studies	www.edu.gov.mb.ca/k12/cur/socstud/index.html
Science	www.edu.gov.mb.ca/k12/cur/science/index.html
Physical Education/ Health Education	www.edu.gov.mb.ca/k12/cur/physlth/index.html
English Language Arts **	www.edu.gov.mb.ca/k12/cur/ela/index.html
Mathematics	www.edu.gov.mb.ca/k12/cur/math/index.html
Arts Education (Dance, Drama, Music, Visual Arts)	www.edu.gov.mb.ca/k12/cur/arts/index.html
Technology Education	www.edu.gov.mb.ca/k12/cur/teched/index.html

Education for Sustainable Development Website

ESD is not a separate subject area; rather, it is a way of integrating sustainable development concepts into subject-area learning. The ESD page on the Manitoba Education website provides

- newsletters

* The ESD page on the Manitoba Education website provides information on ways to integrate sustainable development concepts into the curriculum.

** The full English language arts curriculum is not available online due to copyright restrictions.

- charts that correlate sustainable development concepts with K-10 student learning outcomes in social studies, science, and physical education/health education.
- grants
- parent brochures
- posters (K-4) and (5-12)
- resources (including connections to appropriate organizations)
- a definition of ESD
- contacts

Additional Resources for Social Studies, Science, and Physical Ed/Health Ed

Social Studies

A list of resources that support the social studies curriculum is provided at www.edu.gov.mb.ca/k12/cur/socstud/supporting/index.html.

Manitoba Education has also published the *Social Studies Field-Based Experience Guidebook*, which can be found at www.edu.gov.mb.ca/k12/cur/socstud/fbe_guidebook/index.html.

Science

A list of resources that support the science curriculum is provided at www.edu.gov.mb.ca/k12/cur/science/scires.html. The Science Teachers of Manitoba (STAM) resource links are also arranged by grade and cluster. For example, Kindergarten Cluster 1: Trees (see www.stam.mb.ca/stam_kindergarten_links.html) has 19 links, including an interactive game. One of the sites helps in identifying trees that might be found on your playground.

Additional Science Resources

LSF (Learning for a Sustainable Future): *Resources for Rethinking: Exemplary Sustainability Resources Reviewed by Teachers for Teachers.*

Available online at www.resources4rethinking.ca.

Environment Canada: *Free Educational Resources for Teachers.* Available online at www.ec.gc.ca/education/Default.asp?lang=En&n=D3D10112-1.

NAAEE (North American Association For Environmental Education): *Choice Picks for Teachers.* Available online at <http://eelink.net/pages/Teachers>.

Physical Education/Health Education

Resources to support the physical education/health education curriculum are provided at www.edu.gov.mb.ca/k12/cur/physlth/index.html. Manitoba Education has published *YouthSafe Manitoba: School Field Trip Resource*, which sets out safety standards for outdoor education, including field trips. Copies were mailed to schools when it was published in 2004, and additional copies may be ordered from the Manitoba Text Book

Bureau at www.mtbb.mb.ca. Schools may have also developed their own standards for field trips, which should be reviewed before students are taken out of the building.

Searching for Resources

Web search engines can also provide links to a large number of useful resources. The search terms *tree*, *kindergarten*, and *sustainable games* produced the following result: <http://wilderdom.com/games/descriptions/HugATree.html>.

Out-of-Classroom Activities

Research

Students learn to relate, value, and appreciate the beauty and importance of the natural environment when they have opportunities to be in nature. Richard Louv's *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder* highlights the significance of out-of-classroom activities and the importance of engaging students' "Wow of Nature" affective domain.

Value

An old Chinese Proverb adopted by outdoor education enthusiasts summarizes the relevance of out-of-classroom activities, including field trips.

I hear and I forget

I see and I remember

I do and I understand

Out-of-classroom activities are a very useful way to help students make emotional connections with aspects of sustainable development.

Safety

In addition to the document *YouthSafe Manitoba: School Field Trip Resource* (2004), divisional guidelines and, in some cases, school safety guidelines should be consulted and followed when pursuing out-of-classroom activities.

Bowman Kindergarten Nature Walks provides useful information for schoolyard walks involving Kindergarten students, including a detailed rationale and an activity guide that includes safety and pre- and post-preparation information for teachers. It can be found at http://bowman.lexingtonma.org/bigbackyard/grade_k/KFPTGuide.pdf.

Places to Visit

The schoolyard is an excellent place for students to visit, but there are many other places that can provide curriculum-relevant sustainable development experiences. You may know of excellent places to visit in your own neighbourhood. The next two resources provide some suggestions.

The *Social Studies Field-Based Experience Guidebook* published by Manitoba Education lists possible field trips organized by grade level. The listings include the name of the relevant social studies cluster, the setting, and contact information for the site, appropriate grades for site use, a description of available activities, and social studies specific learning outcomes relevant to the site. It is available online at www.edu.gov.mb.ca/k12/cur/socstud/fbe_guidebook/full_document.pdf.

Green Map also lists ecologically significant sites, initiatives, and organizations in the Winnipeg area. While not set up as a field trip list, it contains gems such as parks that could be relevant for visits. Plans are being developed to expand the coverage to all of Manitoba. It can be found at www.greenmap.org/greenhouse/en/node/3397.