

Living & Working for a Sustainable Future

Module: Sustainability, Me & My Work

Learner Study Guide

Learning Outcomes


Upon successful completion of this unit, you will be able to:

1. Analyze the importance of sustainability action at all levels.

Learning Activities

To complete this unit, students should:

- ✓ Complete the activities outlined in step 1: Looking Back
- ✓ Complete the activities outlined in step 2: Looking Within
- ✓ Complete the activities outlined in step 3: Looking Forward
- ✓ Submit the required assessment components to your facilitator

	Looking Back: INFORMATION & EXPERIENCE
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NSCC's mission, vision and strategic plan are fundamentally aligned with the principles of sustainability. The College is committed to taking a leadership role in the journey toward sustainability for the benefit of all Nova Scotians. NSCC programs help learners to be able to apply sustainable practices that support economic, social, cultural and environmental stewardship.

This module outlines the framework for how sustainability comes into play at home and at work in our personal and professional lives. But it also creates the connection to sustainability at the international, national, provincial, and community and organizational levels. Sustainability and revitalization are inextricably linked to personal action - the decisions we all make to help create a more sustainable, revitalized world that helps to leave the world better than we found it. This involves our personal choices in our personal lives, but also the choices we make at work and through work with the collective power of the businesses and organizations with which we are directly and indirectly involved.

Since this is the foundation piece, the learning should start with what the terms actually mean. When YOU think of the word "sustainability", what other terms and images come into your mind?

When YOU think of the word "stewardship" what other terms and images come into your mind?

Take action to research online and compare the words, terms and images you came up with some definitions from other reputable sources.

The big thing about sustainability is that it is BIG. It actually relates to just about everything doesn't it?

Over time, there has been a focus on growth, expansion and development. However, by the end of the 20th century, sustainable development has become a much more pressing issue for everyone stemming from growing awareness and concerns relating to sustainability on this planet.

Sustainable development is ultimately about improving quality of life in a way that maintains the capacity of the planet over the long term. At the 1992 United Nations Earth Summit in Rio de Janeiro, Canada adopted Agenda 21, a comprehensive blue print for sustainable development. Chapter 36 of the Agenda states that all education and training "should be reoriented toward sustainable development."

There is a major role that education has to play in this process, particularly the role of technical and vocational educational organizations like NSCC. This is elegantly stated in the United Nations Bonn Declaration 2004 - Learning for Work, Citizenship and Sustainability: *"...since education is considered the key to effective development strategies, technical and vocational education and training must be the master key that can alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and help achieve sustainable development."*

The word sustainability comes from the Latin *sustinere*, with the literal translation meaning to hold up. Dictionaries provide different meanings of sustainability, the main ones being to maintain, support, or endure. More recently, the word has been used more in the sense of sustainability on this planet, resulting in the most widely used definition, that of the United Nations Brundtland Commission: *"sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."* Sustainability is also a call to action and a "journey" - The collaboratively created Earth Charter promotes "a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace."

Sustainable development recognizes that building a truly sustainable way of life requires integrated action in what have come to be known as the pillars of sustainability. Different organizations represent these pillars differently, but all essentially include the same interrelated elements. These are summarized below.

- **Economic Sustainability Element:** Fundamentally about the effective management of the resources – it is essential that economic development encompass an integrated approach fostering responsible, long-term development
- **Social Sustainability Element:** Fundamentally about the groups of people and communities who engage in common interest
- **Cultural Sustainability Element:** Fundamentally about the arts, customs, values and beliefs that characterize a people's way of life
- **Environmental Sustainability Element:** Fundamentally about the natural world surroundings, our ecosystems.

Sustainable development must be an integral part of the mandates of all agencies of governments, of international organizations, and of major private-sector institutions. Organizations have a responsibility and accountability for ensuring that their processes, policies, programmes, and budgets encourage and support activities that are sustainable both in the short and longer terms. Organizations need to pursue their traditional goals in such a way that those goals are reinforced by a steady enhancement of the resource base of their own communities and of the small planet we all share (United Nations Report of the World Commission on Environment and Development: Our Common Future, 1987).

The interconnected dimensions of how we promote, encourage and ensure survival, but also taking this to another level of how we can take action to leave the world a better place than we found it.

Sustainability and stewardship fundamentally relate to each person, but there are also many other levels of connections. Let's start with you as a learner at NSCC. As a learner at the College, sustainability relates to you, but it also relates to the organization as a whole and all of the faculty, staff, and managers that work here. Sustainability also relates to the work you will do once you graduate, to the employers who provide employment opportunities for College graduates. We are all in this together.

NSCC has taken a proactive role in its journey with sustainable development. The sustainability efforts are promoted, encouraged, nurtured, developed and evolved in an organic way that has allowed attention to be focused on areas where there were both champions and identified needs.

"The Greening of NSCC" is a multi-layered vision that involves the construction of internationally recognized, environmentally-friendly buildings, the creation of ecologically-themed curricula, and the development of leading-edge environmental knowledge and sustainable practices.

For example:

NSCC's Manager of Energy & Sustainability, Jim Farrell, knows there's more to being green than simply declaring it. Jim is constantly searching out ways to reduce NSCC's carbon footprint; a sort of "green detective" if you will. With financial help from Conserve Nova Scotia's "Smart Lighting Choices" program, Jim is overseeing the replacement of out-dated lighting systems at every NSCC campus across the province. Once complete, NSCC expects to reduce greenhouse gas emissions by 550 tonnes. "That's the equivalent of taking 136 motor vehicles that travel nearly 20,000 kilometers per year off the road," says Jim. "It's also an important reminder that some solutions are at our finger-tips; literally at the flick of a switch."

NSCC's new Energy Sustainability Engineering Technology (ESET) program helps tradespeople become "Green Collar Workers". Energy solutions become more complex as people seek ways to incorporate alternative and renewable energy sources into new and existing buildings. Demand for that kind of knowledge is what led to the development of the ESET program; a two year diploma that began in 2009 at NSCC's Annapolis Valley Campus.

NSCC's Waterfront Campus is in the final stages of earning its Leadership in Energy Environmental Design (LEED) certification. LEED certified buildings are rated on performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

Currently under construction, NSCC's Centre for the Built Environment aims to surpass those standards. It will consume half the energy of conventional buildings and maximize the use of alternative energy sources such as solar and geothermal. Planted roof tops and "bio-walls" (structures that support indigenous and exotic plant life) are also in the plans. The Centre for the Built Environment (CBE) will be a learning tool itself: its mechanical systems will be accessible and interactive allowing students to monitor the building's performance and experiment with sustainable building solutions.

These are just a few examples, there are a diversity of sustainability initiatives that engage NSCC learners, faculty, staff and industry that have happened and are happening across the province.

In December 2009, NSCC became an organizational member of the Association for the Advancement of Sustainability in Higher Education (AASHE). AASHE is an association of colleges and universities that are working to create a sustainable future. The mission is to empower higher

education to lead the sustainability transformation by providing resources, professional development, and a network of support to enable institutions of higher education to model and advance sustainability in everything they do, from governance and operations to education and research. AASHE envisions a prosperous, equitable, and ecologically healthy world. In such a world, higher education plays a vital role in ensuring that people have an understanding of the interdependencies between environmental, social, and economic forces and the skills and abilities to meet sustainability challenges.

Take action to visit the association website at
<http://www.aashe.org/>

Tour the information and resources available to you.

In particular, you might want to check out the "Resource Centre" and the Campus Sustainability Discussion Forums - a collaborative area where you can review (and participate if you choose) in discussions on a diversity of topics including: Education, Curriculum, Research, Operations, Buildings, Climate, Dining Services, Energy, Grounds, Purchasing, Transportation, Waste, Water, as well as Planning, Administration & Engagement.

In addition to the connections here at the College and between other learning organizations, there are also connections at the community, provincial, national and international levels.

In communities within Nova Scotia, there are a number of municipal level government departments and agencies with a mandate relating to sustainability. Some might argue that all should have this as a part of their mandate.

Take action to research what municipal level by-laws, regulations and other legal requirements relate to sustainability.

In the Province of Nova Scotia, a number of provincial level government departments have a mandate relating to sustainability.

Take action to research what provincial level acts (laws), regulations and other legal requirements relate to sustainability.

In Canada, a number of federal government level departments have a mandate relating to sustainability.

Take action to research what federal level acts (laws), regulations and other legal requirements relate to sustainability.

At an international level, the United Nations (UN) is an organization committed to maintaining international peace and security, developing friendly relations among nations and promoting social progress, better living

standards and human rights. The work of the United Nations reaches every corner of the globe. Although best known for peacekeeping, there are many other ways the work of the United Nations impacts our lives and helps make a better, safer world for this and future generations (Source: United Nations website <http://www.un.org/>).

Take action to research what international level acts (laws), regulations and other legal requirements relate to sustainability.

Think about what you have learned in researching what international, federal, provincial, and municipal level legislative requirements relate to sustainability.

At the personal level, the module centres upon something you may or may not have heard of before - **The Earth Charter**. The Earth Charter is a declaration of fundamental ethical principles for building a just, sustainable and peaceful global society.

"At a time when major changes in how we think and live are urgently needed, the Earth Charter challenges us to examine our values and to choose a better way. At a time when international partnership is increasingly necessary, the Earth Charter encourages us to search for common ground in the midst of our diversity and to embrace a new global ethic that is shared by an ever-growing number of people throughout the world. At a time when education for sustainable development has become essential, the Earth Charter provides a very valuable educational instrument." (Source: The Earth Charter)

The Earth Charter is centrally concerned with the transition to sustainable ways of living and sustainable human development. It provides a framework to guide the transition to a sustainable future by providing a vision of hope and a call to action.

Take action to REVIEW "The Earth Charter" - This is available online at:

<http://www.earthcharterinaction.org/content/pages/Read-the-Charter.html>

If you have previously read this document, be sure to take the time to review it again. You will notice that sometimes the same content can strike you at different times in different ways...



Looking Within: REFLECT & SHARE

You have now considered (or reconsidered) "The Earth Charter" - a product of a decade-long, worldwide, cross cultural dialogue on common goals and shared values that began as a United Nations initiative, but was carried forward and completed by a global civil society initiative.

Think about what you have read and how it struck you.

Take the time to REFLECT on what you have read.

What does all this mean to YOU?

Record your reflection in some form.

After taking the time to consider what "The Earth Charter" meant to you, your next step will be to SHARE your reflections with someone else. Learning takes on deeper meaning when it is shared. Taking the time to share your reflections with someone else allows you to experience someone else's perspective.

How were your responses similar? How were your responses different?

Take advantage of opportunities to engage in further dialogue with your co-learners and your facilitator about what you have been reading and discovering in the course to date.



Looking Forward: APPLICATION & ACTION

So far you have been doing a lot of investigative work. This is important. You have done research to determine the framework for sustainability at the international, federal, provincial, municipal and personal levels. Now we

would like you to dig deeper into considering YOUR impact - things you are doing or could be doing relating to sustainability.

There are some amazing resources relating to sustainability and environmental stewardship. Some of these have to do with calculating your impact on the environment - your "eco-footprint" or "environmental impact" - there are many names for these types of learning activities.

Take the time to research online to find a personal environmental impact / eco-footprint calculator learning activity that you like. You are required to complete the learning activity and then reflect on it. You will be required to submit to your instructor a one page reflection on completing your selected personal environmental impact learning activity.

- *Name:*
- *Title of personal environmental impact / eco footprint learning activity:*
- *Online Location / URL of personal environmental impact learning activity:*
- *One paragraph to describe the personal environmental impact learning activity (What did it involve?):*
- *One paragraph to reflect on completing the personal environmental impact learning activity (What did it mean to you?):*

If you are having a challenging time finding a related personal environmental impact learning activity that you like, you may want to try the EcoAction Teams EcoAction Calculator. This is a Canadian resource - EcoAction Teams is a community-based program of Earth Day Canada. Established in 2003 as a pilot program, in 2007, the online calculator were upgraded to account for differences in how energy, waste and water are produced and used in each province and territory across Canada. Now in Phase 1 of a cross-country roll-out, Earth Day Canada is partnering with individual municipalities and other partners to deliver environmental strategies and savings via the EcoAction Teams program. This particular resource allows you to preview the resource without logging on, or you can sign up as a member to be able to view your savings report and checklist, or to participate as a team. Search online to see if you can find the organization. If you are having a hard time try the URL: <http://calculator.ecoactionteams.ca/welcome.aspx>

There is also a neat online calculator available through the International Earth Day Network - you have the option of completing the calculator without providing your email address but you will have to indicate where you are and for now the closest physical "location" on the map is Calgary, Alberta, Canada but we have planted seeds about having Nova Scotia added

to this map as well! Search online to see if you can find the organization. If you are having a hard time try the URL:
<http://www.earthday.net/footprint/flash.html>

There are many different options available for calculating your ecological footprint. Another possible resource is through the Global Footprint Network. In 2003, Global Footprint Network was established to enable a sustainable future where all people have the opportunity to live satisfying lives within the means of one planet. An essential step in creating a one-planet future is measuring human impact on the Earth so we can make more informed choices. The work of the Global Footprint Network aims to accelerate the use of the Ecological Footprint — a resource accounting tool that measures how much nature we have, how much we use, and who uses what. The Ecological Footprint is a data-driven metric that tells us how close we are to the goal of sustainable living. Check out the resources online and try some of their learning opportunities available through the Global Footprint Network. Search online to see if you can find the organization. If you are having a hard time try the URL: <http://www.footprintnetwork.org>

There are all kinds of personal environmental impact related learning activities available online. Find one you like, complete it, document the learning and reflect on the process using the questions outlined above. You are required to submit this one page learning artifact to your course facilitator.

- **In addition to what you submit to your facilitator, you are also encouraged to participate in formal and informal dialogue opportunities with co-learners. Discuss the following question: How did this module impact YOU?**

Assessment



In order to receive credit for this module, you are required to submit to your facilitator your personal environmental impact learning artifact as well as a single page learning reflection. This reflection must include the components outlined below and fit on one single letter size page with a minimum 10 point type font.

- **Module Name:**
- **Learner Name:**
- **How did this module INFORM?** Based on your module readings, reflections and collaboration with others, provide a one paragraph summary of how the content from this module has informed you relating to the importance of sustainability action. What is the single most important thing you learned from this module?
- **How did this module INFLUENCE?** Knowledge is one thing, but learning takes on deeper meaning when it is reflected upon and shared. Throughout this module you have been encouraged to discuss, reflect, share and collaborate with other learners in your journey through the content and activities. Provide one paragraph of reflection evidence indicating how others helped to evolve your attitudes and /or how you have helped to change the attitudes of others.
- **How did this module INSPIRE?** Knowledge and attitudes are important but actions and behaviours are where change often most noticeably happens. Really think about the things you can do (and are already doing). Sum up the personal action steps you are currently completing and/or plan on taking based on this module.
- **Your learning is documented in many forms. Your submitted reflection pieces and the different pieces of evidence from the learning activities you completed are all important artifacts of your learning – they are representations of what and how you have learned.**
- **Your lifelong learning and action to help create a more sustainable future continues on from here...**