



Stewards of the Future

Toolkit

2014/2015

An Educator's Guide to Stewardship and Sustainability Learning in BC



An initiative of the

Government House Foundation
and the Honourable
Judith Guichon,
Lieutenant Governor of
British Columbia

Acknowledgements

Many experienced educators and a range of partners have been involved in developing and supporting this initiative. The Honourable, Judith Guichon, Lieutenant Governor of British Columbia, had the vision and passion to initiate the process and the commitment to bring it to fruition.

Many staff at Government House championed the project from the beginning, and provided excellent input, expertise and logistical support to ensure its success.

Sue Staniforth was the main curriculum developer, writer and coordinator (Education & Outreach Coordinator, ISCBC).

A big thank you is owed to the Government House Foundation, who helped provide the funding to initiate the project.

Special thanks to the two exemplary advisory teams who provided their guidance, expertise and support:

Educator Advisory Committee: Jo-Anne L. Chrona, District Helping Teacher, Aboriginal **Education, Surrey School District** Kirsten Dibblee, Parkland Secondary School: Science, Outdoor Education Scott Noble, Shawnigan Lake School: Secondary Science Peggy Ransom, Shawnigan Lake School Secondary Science Erin Stinson, Parkland Secondary School: Biology, Geography, Special Education Laura Tait, Director of Instruction, Aboriginal Education, Nanaimo Ladysmith Public Schools

Government /Foundation Advisory Committee: Eva Riccius: Manager, BC Parks Kerrie Mortin: Manager, Education Programs, Habitat Conservation Trust Foundation Connie Cirkony: Education Officer, Ministry of Education Pat Tonn: Youth Development Manager, Sustainable Agriculture Management, Ministry of Agriculture Irene Guglielmi: Manager, Partnerships & Intergovernmental Relations, Ministry of Education **Becs Hoskins: Community** Engagement Specialist, BC Parks

Special thanks also to the many provincial partners who have contributed resources, support and energy to making this initiative a reality: Please see the Partners List in the Resources section.

Table of Contents

Acknowledgements

Forward

Welcome to the Stewards of the Future Toolkit!

1. Program Overview	6
Stewards of the Future Program Objectives	7
Background on Stewards of the Future	8
2. How Stewards of the Future Works	9
Who Can Apply?	
What Do Teachers and Students Receive?	
The Role of Program Partners	
Stewards of the Future Process	
3. The Stewards of the Future Toolkit	13
Conceptual Framework	
Benefits of Outdoor Learning	
4. Stewards of the Future: Activities	17
1. Voices from the Land: A Community Photo-Documentary	
2. Systems Thinking and Personal Connections Brainstorm	
3. Community Issues: Systems Thinking and Concept Mapping	21
4. Check These Out: Investigate Some Project-Based Learning Activities	22
5. Do an Interview!	
6. Projects and Presentations: Putting it all Together	
7. Discuss, Debate with Respect: Engage and Create a Shared Future	
8. Celebration and Community Engagement	29
Appendices	
A. Program Forms	% 1
1. Application Process and Checklist of Criteria	
2. Stewards of the Future Application Form	
3. Photo / Video Consent and Release Form	
4. Project Summary Report: To complete for submission to the Government House Foundation	
5. Student Passport	
B. Teacher/Educator Tips	40
1. Outdoor Group Management Tips	
2. Outdoor Field Trip Planner Sheet	
3. A Note on Conservation When Teaching Outdoors	
4. Field Trip Checklist	44
C. Links to BC Ministry of Education Curriculum Grades 9 - 12	45
D. Educator Resources and References	59
1. Environmental Education and Stewardship Organizations and Resources	
2. Resources for Project-based Learning / Youth Engagement	
3. References	
4. Partners and Resources	

Forward

Introducing Stewards of the Future



It is my great pleasure to introduce my Stewards of the Future program to students and teachers across British Columbia. One of the priorities throughout my tenure as Lieutenant Governor is to encourage young people to connect with the land and understand the precious resources we have under our feet. It is important for the next generation of youth, our future leaders from all backgrounds and from every corner of British Columbia, to appreciate the importance of our natural environment and the lands on which our civilizations rest.

Through Stewards of the Future, students will have the opportunity to explore issues that affect the land, water and other natural resources in British Columbia.

The goal of this program is not to solve the challenges we face, but rather to encourage open discussion and gain a better understanding of the issues that affect our natural surroundings. By engaging in respectful conversation we can build relationships with one another, take responsibility for our shared future and together build a healthier and more vibrant society.

I look forward to seeing what the inquiring and creative minds of youth will discover about this beautiful and bountiful province. It is my hope that through their participation in Stewards of the Future students will develop a broader understanding of the environmental issues affecting us and consider about how we can come together to establish a vision for a sustainable future.

Sincerely,

The Honourable Judith Guichon, OBC Lieutenant Governor of British Columbia



Coat of Arms

Her Honour has a longstanding connection to the land, having operated Gerard Guichon Ranch Limited in the Nicola Valley and introducing holistic management, a farming method which promotes sustainable management of livestock by emphasizing their natural habitat, to the ranchers of British Columbia. This connection is reflected in Her Honour's official

Coat of Arms. The arched line evokes the landscape near Nicola Lake, where the Guichon family has ranched for generations.

The bluebunch wheatgrass is an important plant for foraging by the livestock bred on the ranch. The branded horse and steer represent the livestock and the reaping of the benefits of sunshine. Below, the burrowing owl lives in harmony with the cattle and represents Her

Honour's ongoing efforts to learn about and respect biodiversity. The grouse on top symbolizes the joy found in biodiversity. The motto "Relationships Respect Responsibility" represents Her Honour's underlying belief that healthy relationships between people and the land that supports and nurtures must underpin our actions in respectful and responsible ways.

Welcome to the Stewards of the Future Toolkit!

Stewards of the Future provides funding and support for high school teachers and other educators to go on field trips, visit local sites of interest, and engage in stewardship projects in their communities. This guide has been created for teachers, leaders and students to inspire and support them in becoming involved in hands-on, place-based explorations of their communities, and the stewardship issues relevant to them.

This Toolkit includes some background on the Stewards of the Future initiative, research on place-based learning and action projects, an outline of the overall program process and funds available, a listing of partners to support your efforts, and activities and tools for students, teachers, and other groups to get engaged.

Thank you for your interest and good luck!

"Place-based education... celebrates, empowers and nurtures the cultural, artistic, historical and spiritual resources of each local community... It re-integrates the individual into her homeground and restores the essential inks between a person and her place."

- Laurie Lane-Zucker, Orion Society

"Without our differences, we can never know the meaning of understanding."

- Simon Lucas, Nuu Chah Nulth elder





1. Program Overview

Introduction: What is Stewards of the Future?

Stewards of the Future (SoF) is an exciting new youth initiative of the Honourable Judith Guichon, Lieutenant Governor of British Columbia. The program is a province-wide high-school student initiative designed to engage students in hands-on activities and "real-world" learning experiences in their communities. Its overall goal is to:

"help students understand the complexity of our relationship with the environment and their responsibility to be leaders and stewards of the future now"

(*Stewards of the Future* Concept document, Dec. 2013).

The program supports students with funding and resources in exploring their own communities, to discover and document unique attributes, ecosystems and special places, identify and research key issues of concern, and investigate stewardship initiatives that are addressing these issues.

This program and Toolkit can be used by teachers and other educators (e.g., Guide and Scout leaders, 4-H Club leaders, environment clubs, etc.) to augment and expand virtually any class or program. Teachers/leaders are encouraged to apply to the Government House Foundation for direct support as discussed later in the Toolkit.

Selected classes/groups will be supported by funding and by a provincial Program Coordinator, who will facilitate connections to stewardship



projects, partner groups, and local resources. Classes and groups that are not selected for direct support are still able to complete the program using the Toolkit to assist and individual students will be able to complete individual programs to receive recognition from the Lieutenant Governor.

The program emphasizes experiential, outdoor learning, supported through four main activity types:

- 1) **Guest Speakers** opportunities to have local experts visit the class and present some history, content and perspectives on an issue of interest.
- 2) **Interviews** a chance for students to directly interact with a stakeholder involved with the issues of study (e.g., an employee, rancher, First Nations elder, scientist, volunteer).

- 3) **Field Trips** direct experiences that will help students better understand and research their communities and the stewardship issues that affect them. Visits could include trips to: urban community gardens, fish hatcheries, cattle ranches, homeless shelters, university labs, the mayor's office, sewage treatment facilities, etc..
- 4) **Inquiry and Discussion** once students have been exposed to the complexities of their community and environment, they research, discuss and debate the issues that lie before them as Stewards of the Future (i.e., environment /economy, sustainability/resource extraction, biodiversity/urban growth, etc.). Reflecting on Her Honour's "three R's" Respect, Relationships and Responsibility, students wrestle with conflicting priorities to consider the future of their communities, environment and their province.

Stewards of the Future Program Objectives

Students will:

- Increase their knowledge and understanding of key environmental, conservation and sustainability issues along with the natural and social systems that underlie them;
- Engage in learning grounded in principles of traditional knowledge including First Nations wisdom: holistic, experiential, and relational (i.e. a focused on connectedness, on reciprocal relationships, and a sense of place);
- Increase their understanding and appreciation of BC's incredible biological diversity, and its fundamental importance to our survival;
- Identify and engage in relevant, real life issues and solutions that resonate with them and their communities; collect data on what is happening now.
- Increase their awareness of personal responsibility as stewards, and their roles as engaged citizens;
- Develop communication skills and techniques of respectful debate through peer and community sharing.

Curriculum Connection

The program's objectives and key concepts are linked to many subject areas, as shown in the enclosed *Prescribed Learning Outcomes Table*. There are strong curriculum connections to: Science 9, 10 and 11, Social Studies 9 – 10, Physical Education / Outdoor Education 9 – 12; Applied Skills 11, Science & Technology 11, Sustainable Resources 11/12, Tourism 11, Planning 10, Career and Personal Planning 11, Geography 12, Biology 12, and First Nations 11/12.

The Toolkit also supports and reflects the *First Peoples Principles of Learning*, also emphasized through the program activities and objectives.

Background on Stewards of the Future

Purpose of Stewards of the Future:

To promote the concept of a holistic approach to our endeavors based on respect, relationships and the responsibility of all for the future.

Overall Objectives: Healthy Land, with Healthy People, in Healthy Communities.

Guiding Principles for the Program:

- A Caring Approach
- Sense of fun
- Builds Quality of Life
- Informed by Traditional Knowledge/ wisdom of elders
- Youth Focused
- Holistic

There are three components to the SoF program, as envisioned by the Honourable Judith Guichon, Lieutenant Governor of British Columbia:

- 1. provincial visits by the Lieutenant Governor to programs, organizations and projects that promote similar objectives;
- 2. an annual awards recognition program; and
- 3. a youth education component

Supporting Partners: Many government organizations, non-governmental organizations, and other groups have partnered with the Government House Foundation to support the implementation of this initiative, using their combined resources and networks. These include:

- BC Ministry of Education
- BC Parks
- Ministry of Agriculture: Sustainable Agriculture Management
- Invasive Species Council of BC
- Habitat Conservation Trust Foundation/ Wild BC
- Pacific Salmon Foundation
- Habitat/Nature and Land conservation groups
- Youth leadership organizations
- Youth in nature programs
- Sustainable agriculture and resource development groups
- Supporters of education
- Stewardship groups
- Other like-minded organizations, non-profits and individuals

All partners and their contact information are listed in the **Resources Section**.

If your organization would like to participate as a partner in the Stewards of the Future program, please contact **info@bcgovhousefoundation.ca**

2. How Stewards of the Future Works

Who Can Apply?

Educators (teachers and non-formal educators such as community, First Nations and youth group leaders) can apply on behalf of their class or club. The program is aimed at students in Grades 9 – 12, but is flexible in terms of subjects and age levels to accommodate a diversity of participation.

Applications for funding for Spring 2015 are due by Friday, January 23, 2015. Applicants who miss the funding deadline are still welcome to participate in the program.



What Do Teachers and Students Receive?

Stewards of the Future provides funding and support for teachers and other educators to go on field trips, visit community venues and engage in stewardship projects in their communities. *The Application Form* asks for the a Project Outline that includes one or more field trips, guest speakers, and interview opportunities, with a strong emphasis on outdoor experiences.

 Funding: Once accepted into the program, an educator will receive access to funding from the Government House Foundation for project implementation, which can be used for transportation costs, program fees, teacher release time, honorariums, equipment, project materials, etc. There is access to between \$200 - \$800 per class / group, depending on the project emphasis and level of need. Special funding for activities in BC Parks may be available as well.

- Support: The Stewards of the Future Program
 Coordinator will liaise with the educator to
 assess their specific needs, and initiate and
 facilitate connections to relevant community
 groups, resources, potential guest speakers
 and field trip site locations.
- Student Passports: Students can download their own Stewards of the Future Student Passport, which contains a checklist of activities. Once the student completes the requirements and gets it signed off by a teacher or leader, they will receive additional

program recognition from the Lieutenant Governor, including a special commemorative pin and program certificate. Whenever possible, the Lieutenant Governor will present these in person.

- Project Profiles: Student work will be profiled on the Government House Foundation's Stewards of the Future website.
- Recognition: Students and educators completing the program will receive official recognition letters from the Lieutenant Governor.
- Celebration / Recognition Events: There
 will be opportunities and support for local,
 regional and provincial celebratory events,
 where students will showcase their work,
 engage with stewardship organizations from
 across BC, and celebrate their learning. These
 may include regional visits and presentations
 by the Lieutenant Governor, local events,
 and the opportunity to be invited to student
 conferences.

The Role of Program Partners

Provincial program partners are organizations that share the general principles and objectives of this program and have made a commitment to assist. These partners contribute to the program in several ways, depending on their ability and resources, for example, by:

- providing mentors and local guest speakers;
- helping students access resources to support their research;
- suggesting relevant field trip locations (e.g., forestry operations, stream stewardship, fish hatchery, agricultural operations, parks, ranches);
- providing equipment and field support for class/group field trips and/or individual student site visits.

 providing supporting funding towards a class or group project;

For example, if a Grade 10 class in Williams Lake wants to research invasive species impacts on local ecosystems and do a removal /restoration project, a provincial partner – like the Invasive Species Council of BC - can suggest local guest speakers, provide resources for research, identify suitable field trip sites and support hands-on invasive species identification, mapping and removal projects.

Program Partners will receive:

- The opportunity to explain issues they are passionate about to BC youth;
- Program communications and logistical support from the Government House Foudnation and the SoF Program Coordinator;
- Official recognition from the Lieutenant Governor;
- Profile and logo on the SoF web site and welcome letter;
- Thank-you recognition from the students;
- An invitation to year-end celebrations and to conferences.

Stewards of the Future Toolkit

Stewards of the Future Process:

Program Launch

In December 2014, all high schools and school districts in BC will receive a welcome letter from Government House outlining the program and inviting classes to participate. The letter will also be sent to the many youth groups and organizations in the province, including Pathfinders, Scouts, 4H Clubs, Environmental Youth Alliance, Youth4Action, and Sustainable High Schools of BC. The letter will contain a brief description of the program, an online link to the Toolkit and Student Passport, and a list of some of the provincial partners.

Step 1. Application Process

The teacher /group leader will apply to the program online, via the Government House (GH) website. Application forms and criteria are located on the Government House Foundation website and in the *Toolkit Appendices*. The SoF Program Coordinator will be available by email to answer questions, support teachers in completing the applications, and suggesting resources and local partners.

Applications will be accepted until **Friday, January 23, 2015.**

Step 2. Application Review

All applications received by the due date will be reviewed and assessed by a Review Committee, consisting of experienced educators. Successful applicants will be notified by Friday, January 30, 2015.

Step 3. Preliminary Discussions with Program Coordinator

Once accepted into the program, the teacher / group leader will receive a welcome email and be contacted by the Program Coordinator (email and/or phone). The Coordinator can assist with discussing student interests, logistical challenges and opportunities. The coordinator may also identify and contact local groups who can provide information and access to key sites in the community, potential field trip locations, and guest speakers. (e.g., resource-based facilities, ranches, farms, fish hatcheries, mills, water treatment plants, housing developments, etc.).

Step 4. Winter- Spring 2015: Planning & Funding SoF Community Learning Opportunities

The educator will present the program to the students in early 2015 and work through some activities using the Toolkit or other resources to highlight community features and identify themes that students may want to explore.

In addition, students will be provided with a link to the Stewards of the Future Student Passport, an optional checklist of activities that they can download and pursue both individually and/ or with the class / group, to qualify for specific individual program recognition.

Once the class / group has decided on their project theme and specified any needed resources (e.g., guest speakers, research resources, transportation costs, fees, teacher release time, etc.), the educator will email a brief *Project Outline* to the Program Coordinator, confirming costs and project timelines. Students are to participate in at least one field trip to a relevant location, to directly experience elements of the issue they will research. The Coordinator will then provide the requested funding from the Government House Foundation to the educator.

Step 5. Community-based Learning Activities and Field Trips

Teachers/leaders and students carry out their community learning project, using the funding to support implementation and working with Program Partners if applicable. The Toolkit activities and/or those found in the recommended resources (See *Educator Resources*) and References section) can be used to enhance the curriculum, and to engage students in exploring and researching community issues. Research, teamwork, concept mapping, systems thinking, stakeholder interviews, field trips and presentations are all part of the suggested activities. Students can also fill out their Student Passports through participating in both class and individual activities that enhance their community explorations.

Step 6. Reflect and Celebrate

Educators will ensure the students' documented project plus one photograph is submitted, using the Project Summary Report document. This will represent the final report back to the Lieutenant Governor and trigger her recognition letters and possible visit to the school or organization. At this time, educators may apply for further available funds to be used for a celebration or continuation of the project. Teachers will also be contacted to provide feedback on program challenges and successes, and make recommendations to improve the SoF program. They are encouraged to share their project with the school, other community groups and/or the media.



Stewards of the Future Toolkit 12

3. The Stewards of the Future Toolkit

About this Section

This section of the Toolkit includes the program's conceptual framework, some research on the benefits of place-based learning and action projects, links to past and present action projects to inspire you and your students, and activities and tools for students, teachers, and other groups to get engaged.

"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise." – Aldo Leopold



Conceptual Framework

These themes frame the Toolkit and guide student learning. They can be used to plan teaching units and school projects, serve as a template to help assess prior knowledge and learning, and help students plan and monitor their own learning projects.

The key concepts have been developed for both educators and students, to help explain the focus on certain themes along with their application in the real world.

People protect and care for things they value.
 Our heritage, culture and sense of place influence our values.

- Stewardship refers to caring for what we collectively share, such as our environment and natural resources. Active stewardship is important for the conservation, restoration and sustainability of our communities, economies and their surrounding ecosystems.
- Youth are active and effective stewards of the future. Actions can and will influence what British Columbia will look like in the coming decades and their respectful leadership will influence their peers and communities.
- Natural areas exist in our neighbourhoods, communities and in nature. Their discovery, exploration, enjoyment and active stewardship are valuable learning experiences for students.
- Natural areas are part of surrounding ecosystems that sustain all life (e.g., water

Stewards of the Future Toolkit

filtration, pollination, climate regulation) and are affected by our actions within and beyond their boundaries. Successful stewardship depends on the commitment of everyone.

- Place-based education, the exploration of local cultural, natural, economic and historical heritage, re-integrates and restores the essential links between people and their communities.
- Direct, personal experience and involvement with natural areas, stewardship projects, biodiversity and resource-based industries in our communities helps develop one's sense of place.

By having respect for our place, the land, water and air, plants and animals, along with respectful relationships with each other, we are better able to deal with the complex decisions that impact our future. Participants in this program will accept their responsibility to engage in these issues, to debate them respectfully, to be Stewards of the Future now, and to work to leave this province in as good or better condition for the next generation.

Note: These concepts are closely aligned with the *Environmental Learning and Experience* (*ELE*) learning principles, published by the BC Ministry of Education (2007). The ELE principles for organizing and conceptualizing environmental education include the organizers of *Complexity, Aesthetics, Responsibility and Ethic (CARE)*: a consideration of complexity and complex systems, aesthetic appreciation, responsible action and consequences of action, and the practice of an environmental ethic.

The ELE's learning cycle model of direct experience, critical reflection and negotiation are also supported and endorsed by the activities and strategies within this guide.

https://www.bced.gov.bc.ca/environment_ed/



Benefits of Outdoor and Project-based Learning

Hands-on, real-world learning "increases academic achievement, helps students develop stronger ties to their community, enhances students' appreciation for the natural world, and creates a heightening commitment to serving as active, contributing citizens." (Sobel 2004, p. 7).

Outdoor Learning and Health Benefits

There are several decades of research that link our mental, physical and spiritual health with our associations and experiences with nature. Providing students with outdoor experiences has important impacts on the development and maintenance of their physical health and wellbeing. Direct experiences in nature helps develop healthy bodies and minds, reduces stress, protects psychological well-being, and increases student attention spans (Cirkony, 2012; Kellert, 2005; Maller, et al., 2005).

Biodiversity and Systems

An ecosystem is not a collection of plants and animals. It is a seamless swirl of communities and processes. If you don't save the processes, you won't save the parts. (Chadwick, 1993)

British Columbia is a province with many different ecosystems, each with a distinct biodiversity. More species of living things live in BC than in any other province in Canada: BC has 70% of Canada's nesting bird species, 72% of Canada's land mammal species, 50% of Canada's amphibian species and 60% of Canada's plant species. It is important for students to understand and appreciate this incredible biological diversity, and how our survival depends on its protection. All forms of life have value and play a role in the cycles of life on the planet. Our health, spiritual values and survival are dependent on conserving the variety of life on Earth. We all need to understand how our lives connect with the lives of plants and animals, in order to act

in more caring ways towards them. Preserving and restoring biodiversity supports healthy relationships between all the living and nonliving parts of our various ecosystems. As well, the beauty, amazing variety and complexity of the many inhabitants we share this province with are a source of inspiration, creativity, and enjoyment.

Biodiversity BC is a partnership of government and conservation organizations formed to develop a biodiversity strategy for BC. Their key status reports and the Biodiversity Atlas of BC can be downloaded from their web site.

http://www.biodiversitybc.org



Why Place-based Learning?

Place-based or community learning involves students as active participants and citizens in their community. Place-based learning enables students to explore and apply skills that encourage leadership development, social responsibility and engaged citizenship. Placebased education has been shown to inspire stewardship and renew civic life, as students reconnect with their communities and develop skills to care for the environment. This reconnection and empowerment is especially important for adolescent students, who need opportunities to work on real, tangible problems in their own communities, and have more sophisticated skill sets to tackle action projects. (Beane, 1997; Smith, 2002; Sobel, 2004).



Project-based Learning

Real-life, action projects provide venues for skills development, practice and field-testing, and support students in actually taking responsible action on issues and problems that affect them and their community. Actively participating in stewardship projects helps students understand that they have the power to bring about positive and significant change. Project-based learning also enhances creative and critical thinking skills by making learning relevant and applied. Students are encouraged to explore and solve current, real-life problems, as opposed to solving theoretical problems of the future.

Students have opportunities to practice skills of inquiry, values analysis, clarification and problemsolving in relevant, real life situations. When students develop more community perspective and commitment they become "bonded" to their communities and enhance their sense of place, of belonging to something beyond their families and school. Many programs have demonstrated that if students learn basic action skills and play a positive role in solving problems that are of personal importance to them, they will act within the democratic system as responsible citizens, in school and after graduation. (Bell, 2010; Buck Institute for Education.)

Inquiry-based Learning:

Inquiry-based learning helps students become systems thinkers; working in a natural system and at the same time developing an understanding of its complexities and subsystems. Inquiry-based, outdoor experiences in natural settings increase students' problem solving abilities and motivation to learn in social studies, science, language arts, and math. (Pacific Education Institute, 2007)

In the BC Curriculum Redesign, there will be more emphasis on key competencies like self-reliance, critical thinking, inquiry, creativity, problem solving, innovation, teamwork and collaboration, cross-cultural understanding, and technological literacy. We can also connect students more directly with the world outside of school, with

increased focus on learning these skills across topic areas.

We need to make a better link between what kids learn at school, and what they experience and learn in their everyday lives. We need to create new learning environments for students that allow them to discover, embrace and fulfill their passions. We need to set the stage for parents, teachers, administrators and other partners to prepare our children for success not only in today's world, but in a world that few of us can yet imagine.

George Abbott, BC Minister of Education, BC Education Plan, 2013.

"Effective inquiry is more than just asking questions. Inquiry-based learning is a complex process where students formulate questions, investigate to find answers, build new understandings, meanings and knowledge, and then communicate their learnings to others. In classrooms where teachers emphasize inquiry-based learning, students are actively involved in solving authentic (real-life) problems within the context of the curriculum and/or community. These powerful learning experiences engage students deeply. (http://education.alberta.ca/teachers/aisi/themes/inquiry.aspx)

Stewards of the Future Toolkit

4. Stewards of the Future: Activities

Note to Educators:

These optional, curriculum-linked activities are provided to help support your students explore project-based learning and investigate stewardship opportunities in their own communities. They can be done individually, used as part of a unit, or you can choose to pursue Stewards of the Future projects through your own course curriculum.



Activity Descriptions:

1. Voices from the Land: A Community Photo-Documentary

This activity connects students to what they like about their own community. By beginning with positive things that students feel are special about their community, instead of jumping right in with potentially divisive issues, unifying themes that bring people together are identified. Students take digital photos, video, and/or make drawings of their own communities to document their sense of place, and write about why they selected it.

2. Systems Thinking and Personal Connections Brainstorm

This activity acts as a great introduction to systems theory, by engaging students in identifying the many systems that make up their lives, through exploring familiar everyday items.

3. Community Issues: Systems Thinking and Concept Mapping

This activity helps students identify issues in their community through brainstorming a list of the main economic, environmental and social issues that are occurring, and mapping the many systems that intersect.

4. Check These Out: Investigate Some Project-Based Learning Activities

Students research a wide range of action projects and stewardship issues to help provide inspiration and options for projects, and work together to research and select one or more to investigate.

5. Do an Interview!

Students work in teams to conduct one or more interviews with key stakeholders involved with the issue or community project they have selected to research. "How-To" Interview guidelines are provided.

6. Projects and Presentations: Putting it all Together

A template for student teams to create a compilation of their research, experiences, interviews and data / findings to present to the class / another class / post to the Stewards of the Future web site.

7. Discuss, Debate and Propose Solutions

Students conduct a debate, a town hall, or a mock city council debate on an issue of relevance to their community (e.g., the conflicting priorities and outcomes of issues such as resource extraction projects, invasive species, establishing a park, sustainable agriculture, or a cooperative program between First Nations and other communities/industries).

8. Celebration and Community Engagement

Students present their completed research and project work to another class, and/or community audience, and a celebratory event is held to showcase and highlight their efforts.

"Bread and beauty grow best together. Their harmonious integration can make farming not only a business but an art; the land not only a food-factory but an instrument for self-expression, on which each can play music to his own choosing."

- Aldo Leopold (1933)

Stewards of the Future Toolkit

Activities

1. Voices from the Land: A Community Photo-Documentary

Description:

This activity connects students to what they like about their own community. Students take digital photos, video, and/or make drawings of their own communities to document their sense of place, and write about why they selected it.

Rationale:

Place-based learning begins from where the students are. Stewardship work can tend to focus on specific issues or problems in the environment and/or communities, and issues can be divisive. By beginning with something positive that students find special about their place, the program can unearth the unifying themes that bring people together, instead of jumping right in with something potentially divisive (e.g., logging, mining, urban sprawl, sewage treatment, etc.). Focusing on positive themes about place also highlights why a certain location is worth conserving / stewarding.

Materials:

- Digital cameras/cell phones for student use
- Access to computers to compile photos, create a presentation or book



Procedure:

- Initiate a class discussion around what makes your community /region a special place to live in: have students think about their favourite things about where they live, and brainstorm a list together.
- 2. Ask students to each take 10 20 digital photos of their own communities to document their sense of place: what is special about where they live, what do they love about it, what makes it special (Note: they could also take video footage and/or make drawings).
- 3. Ask them to each select one to three of their favourite photos to submit for review, and write something about why they selected them/what is special about the photo.

 Depending on your course goals, you can direct students to link their photos to a variety of possible connections (e.g., ecosystems (e.g., what ecosystem is the image part of / connected to / depicting), literature, music (e.g., what music or literature would go with this photo), art, ethnicity, history, poetry/haiku, etc..
- 4. Have the whole class review and then organize the photos into themes. Then have the class publish the selected photos and write-ups as an online or printed book, or a presentation (e.g., Prezi). The book / presentation layout could also be done by students in a graphics or art class.
- 5. Share the class book with another class, the community, and/or with the Stewards of the Future participants, through the Government House Foundation web site.

2. Systems Thinking and Personal Connections Brainstorm

Description:

This activity acts as an introduction to systems theory, by engaging students in identifying the many ecological, economic and social systems that make up their lives through exploring familiar everyday items.

Rationale:

Exploring the relationships and interdependence of the Earth's social and natural systems is essential to understanding sustainability and stewardship. Understanding systems theory reveals this interconnectedness and offers an expanded perspective of the world as we know it, as students see parts, including themselves, as components of larger wholes that interact with increasing complexity.

For example, exploring a favourite food such as pizza includes system interactions among the 'parts': farmland, grain production, irrigation, pesticides and fertilizers, soil erosion, tractors, trucks, fuel, packaging, advertizing, consumption, etc...

Materials:

- Chart paper, markers
- Example of a systems chart using common daily items

Procedure:

1. Provide a brief definition of a system to the class: For example,

A system is defined as a collection of parts that interact to function as a whole, and continually affect each other over time. The parts of a system are interconnected and organized around some purpose. Systems also have properties that are not found in their separate parts: when the parts are organized into a system, they create new properties, characteristics and behaviours. (Ponto & Linder, 2011)

Have students contribute examples of systems (e.g., bicycle, family, hockey team, house, airplane, ecosystem, etc). Share an example of a systems chart with students to help them understand their task (see *Resources*).

- 2. Divide the class into small groups, and ask each group to select one item from their daily lives to explore through a systems lens (e.g., favourite food, possession or article of clothing, home, transportation to school, etc.). Have the students brainstorm and diagram on chart paper all the products, processes and impacts associated with the systems that make up one of the seemingly simple items from their daily lives.
- 3. Have students explain their work to the class, highlighting the most surprising thing they learned. Then post the charts side by side, and have the class identify similarities and interconnections among them all.

Some good Systems-Thinking Resources:

My School as a System: Activity and examples that apply the concept of systems to student's lives. http://sciencenetlinks.com/lessons/my-school-as-a-system/

3. Community Issues: Systems Thinking and Concept Mapping

Description:

This activity helps students identify issues in their community through brainstorming a list of the main economic, environmental and social issues that are occurring, and mapping the many systems that intersect.

Rationale:

Systems thinking is characterized by the facts that there often aren't simple, linear solutions to problems, therefore problems need to be evaluated in the context of ecological, social, economic and cultural systems. This activity helps students to identify and comprehend the complexity and interrelationships in sustainability-related issues.

Materials:

Chart paper, markers, and/or white board



Procedure:

- 1. As a class, brainstorm a list of the main economic, environmental and social issues that are occurring in your community (e.g., garbage disposal, water quality, homelessness, etc.) and list these on the board. You may need to start the list off by reminding students of some of the current issues in your local municipality / region.
- 2. Select one issue to start the mapping exercise (e.g., loss of farmland to development).

 Use a whiteboard or several pieces of chart paper taped together, and coloured markers.

 Have students brainstorm the concepts and impacts related to that issue and record their ideas on the board. For example: some of these concepts might be: more food imported from afar, more transportation equals increased food costs, more available land for housing, less green space, loss of areas for wildlife, higher density housing, etc.).
- 3. Ask students to explain how the first issue affects other issues (e.g., loss of farmland increases need to import more food; more housing increases drain on resources, transportation, and water, etc.).
- 4. Continue this process: as interest in any particular line of topics wanes, the teacher starts a new line of topics (e.g., development may mean more affordable housing availability). (Note: the actual output of the map is much less important than the *process*). The list of topics from the beginning of the activity is helpful (e.g., perhaps garbage disposal becomes an issue with more housing development). Ask students to identify connections between issues, and highlight these using coloured markers.

(adapted from an activity by Jarchow from InteGrate - Interdisciplinary Teaching about Earth for a Sustainable Future http://serc.carleton.edu/integrate/index.html)

4. Check These Out: Investigate Some Project-Based Learning Activities

Description:

Students research a wide range of action projects and stewardship issues to help provide inspiration and options for projects, and work together to research and select one or more to investigate. As part of Stewards of the Future, students will participate in at least one field trip to a relevant site / location to directly experience elements of the issue they have been researching. The Stewards of the Future Program Coordinator can suggest resources and guest speakers to support.

Rationale:

It is often difficult for busy educators and students to be aware of the many stewardship opportunities, field trip sites and action project ideas that are possible for them to take on. While it is easier for the teacher to provide topics and projects to the class to research, making students part of the selection and research process plays an important role in motivating and engaging them. Also, current research shows that students gain a great deal of knowledge and decision-making skills from reviewing real case studies of past and on-going action projects. (Patton, 2012, PEI, 2007; Hammond, 1997) Note: This activity is based in the concepts and processes of the Sustainability Resources 11 and 12 Course, **BC Ministry of Education Curriculum Framework**.

Materials:

- Chart paper, markers
- Time for students to research website listing of activities and issues

Procedure:

 As a class, brainstorm a list of environmental/ sustainability issues of interest to the students.
 Sustainability issues/topics to investigate could include:

Health and Well-Being, Traditional Ecological Knowledge, Food Production/Security,

Governance/Legislation & Policy, Population Growth, Economy and Wealth Distribution, Biodiversity, Water, Materials/Resources, Air, Energy, Land Use, Ecological Footprint, Housing (adapted from Sustainability Course Content, BC Ministry of Education Curriculum Framework).

- 2. Then, have students work in small groups to research and identify a wide range of action projects and community activities. Assign each group of students to research specific web sites that list past and present project ideas and case studies from BC and beyond (see lists below). Note: If time is short, the teacher can provide a listing of potential action projects for the class to discuss.
- 3. Have each group report back on 3-5 projects they found interesting.
 - Key questions to include in the research are: the name of the issue or problem; why it is important to you; where it is located; who is/ was involved; what they did; what happened.
- 4. As a class, review all the issues presented, and select one issue or topic that you will research together. It is important to identify an issue that can be investigated in your community, through field trip visits, guest speakers, and/ or interviews (e.g., food production: visit a local farm or ranch; energy: visit a hydro or gas facility; Traditional Ecological Knowledge: invite a First Nations elder to speak; water: visit/help with a stream or shoreline restoration project).

(adapted from Bauer, et al, Green Teacher: Teaching Green: The High School Years, 2009, and Staniforth, Leap into Action! 2004) Some program examples are listed here; however, there are many more programs in the *Partners and Resources Sections*.

The BC Green Games

Check out the past six years of Green Games projects at the BCGG Galleries to learn from K-12 students across BC.

http://www.bcgreengames.ca



Connecting to Conservation:

BC High Schools engaged in project-based learning activities:

http://hctfeducation.ca/c2c-community/



HCTF Education / Wild BC

http://hctfeducation.ca

Wild BC Facilitators: There are over 50 education facilitators across BC that can support classes and groups in exploring their communities, planning field trips, and designing action projects. Check out the Wild BC Team and contact the facilitator nearest you.

http://hctfeducation.ca/wildbc/



Habitat Conservation Trust Foundation (HCTF)

The HCTF is a non-profit foundation that funds fish and wildlife conservation and education projects across BC. Check out the projects near you for ideas and potential sites to visit / work on using their interactive map.

http://www.hctf.ca/what-we-do/projects-we-ve-funded/current-projects



Leap into Action:

The Action Projects Gallery activity contains 14 class action project cards, and Section 4: Case Studies contains 14 detailed case studies of actual projects: FREE download

http://hctfeducation.ca/product-category/books-and-guides/



5. Do an Interview!

Description:

Students work in teams to conduct one or more interviews with key stakeholders involved with the issue or community project they have selected to research. Students' interview skills are developed and practiced, and class presentations and/or posters are made to share findings. Interview "How-To" guidelines are provided for students to develop their own interview guides and questions.

Rationale:

Interviews are a great way to discover information about issues, opinions, the history of an issue or project, and its local context. Conducting an interview is also a great way for students to build valuable life skills, gain direct experience with the issue, as well as some intergenerational experience.

Materials:

- Paper and pens, Class copies of *Do an Interview!* Student Guidelines pg. 25



Procedure:

- 1. Identifying interview candidates: The SoF Provincial Coordinator and partner organizations will support the teacher and students in identifying, locating and connecting with relevant stakeholders involved in the issue(s) of study. Once a list of interviewees is developed (complete with relevant contact information), describe the stakeholders to students, and discuss how they are involved with the issue or project of study.
- 2. Developing questions: With the class, brainstorm a list of questions students could ask about the community project, issue or event. For example, they might ask about how the person got involved with the project or issue, how long they have been involved, what types of things they do in their work with the project or activity, why they feel it is important to be involved, and so on. List the questions on the board, and have students record them in their journals.
- 3. Refine the questions/ Conduct the interviews: Have students work in small groups of 2-3 people and give each group a *Do an Interview!* guide. Ask students to develop their list of questions further and try them out on each other, to make sure they are clear and well understood. Have students finalize their list of interview questions, and assign each group a stakeholder to interview. Allow sufficient time for students to complete their interviews: most of these will probably occur over the phone, but some may be able to occur in person.

Note: if time or logistics are a factor, students may also interview a guest speaker where the class develops the list of questions and students take turns asking them.

4. Once the interviews are completed, ask students to share their findings with the class. Have them describe the main things they learned— what were the most significant or important things that they found out?

Do an Interview! - Some Guidelines

Interviews are a great way to find out information about issues in your community: people that are involved can provide you with current information, personal experiences and opinions. To help you get the right information in an organized way, follow these steps for a great interview.



Step 1:

Figure Out Your Audience

Think about the people you'll be talking to. Maybe it's a community member, a local politician, a scientist, volunteer or an employee of a company. Can you interview them in person, or will you be phoning or emailing them?

Step 2:

Figure Out Your Questions

Write down all the things you want to know. Now make them into questions that are short and sweet. Develop about 5 – 8 questions as you don't want the interview to take too long, and ask about *only one main idea* in each question: Is water pollution a serious problem in our community? Are there any laws that exist that prevent people from dumping garbage in the parks? What is happening now? What are the possibilities? What needs to change to help solve this problem? How did you get involved with this issue? Why is it important to you?

Step 3:

Practice with a Partner!

Try out your list of questions on a partner to make sure they are clearly worded and easily understood. Check that you've asked about all the information you'll want to get. Talk about any problems you might have had understanding questions, and work to make your interview questions better.

Step 4: Get Interviewing!

Make a date for your interview or phone call for a specific time. When meeting in person or on the phone, make sure you have a quiet area in which to talk. Have plenty of paper to take notes on. Write down as much as you can in note form and don't worry about neatness – as long as you can read it! If you have an audio recorder, you could record the interview to make sure you get all the details – be sure to ask permission first.

Step 5:

Organize Your Data

When you're finished, organize your notes and answers as soon as possible, so you don't forget anything. Add any the other information you may have collected through emails, photographs, maps or other interviews. Now organize your information into a presentation:

- List the person's name and their connection to the issue, site or event.
- Use your questions as headings to tell your story.
- Describe the issue and say why it is important to that person
- Describe the key points you learned from the interview.

6. Projects and Presentations: Putting it all Together

Description:

A template for student teams to create a compilation of their research, experiences, interviews and data / findings to present to the class / another class / post to the Stewards of the Future web site.

Rationale:

Capture Your Progress! The Importance of Documentation

Documentation is important: keeping a record of a projects' progress, timelines, successes and challenges helps in tracking a projects' evolution, development and conclusions, and in building a final presentation. Also, classes in subsequent years can choose to pick up well-documented projects and continue them, building on past student work and furthering the end goals.

Materials:

 Copies of the suggested framework for students to review, project notes and research, chart paper, markers.

Procedure:

- As a class, decide on how you would like to present your project research: is it best done through a poster? Powerpoint presentation? Slideshow?
- 2. Have teams of students work together to select main themes or sections of the project that each group can then work on to develop. Use the suggested framework to define the different sections and assist in compiling the information, or another format if you prefer.

A Suggested Framework for projects / presentations:

Introduction to the Issue:

What it is about, why is it happening, what importance is it to your community?

(If applicable, include some of the highlights from Activity 1: Voices from the Land, to illustrate how the issue may affect the special features and places that make up your community.)

Stakeholders:

Who are the main people involved? What are their jobs/roles?

Background:

How and why you selected the issue (use the Systems Thinking /concept map notes from Activities 3 and 4 if applicable)

Impacts:

What is the issue / problem / challenge? How does it affect you / your community?

Boundaries and Scale:

What is the scale of the issue? Local? Regional? Provincial? National?

Development/Evolution:

What is the timeline or sequence of events? How did it start? How has it changed? What might happen next?

Networks and Connections:

List the many systems (e.g., ecological, social, cultural, political, economic) that the issue is connected to and interdependent on, and describe the connections and relationships.

Media:

Are there any media articles/ news releases about the issue to include?

Literary / Art / Poetry / Music piece:

Can you respond to or present your findings in a creative, fun way?

Summary/Suggested Solutions:

What are some suggested next steps you'd like to do and see?

Completed and submitted projects are to be posted on the Stewards of the Future website and shared at any year-end celebrations.

7. Discuss, Debate and Propose Solutions

Description:

Students conduct a town hall public hearing, a mock city council meeting or a debate, and role-play individuals representing differing perspectives and concerns related to a complex issue of relevance to their community.

Rationale:

There are many perspectives, needs and differing priorities involved in decisions about land use, stewardship and community development. Stewardship is an ongoing and complicated process, involving input from all those involved. By exploring the different ecological, economic, cultural, spiritual and aesthetic values of an issue, students deepen their understanding of the issues involved. For example, researching and debating the conflicting priorities and outcomes of issues such as a resource extraction project, dealing with invasive species, establishing a park, constructing a dam, sustainable agriculture, or collaboration between industry and First Nations. Students that are thinking long term, searching for durable solutions with mutual gain (win – win), and informed by knowledge of the whole ecosystem and a range of values will help to build strong communities.

Materials:

Background information on an issue of importance to the community /region that has relevance to the students such as a housing development, land claim issues, park proposal, a local resource-based development, etc. Information may be in the form of media articles, internet searches, key stakeholders for students to interview, etc.

Procedure:

- 1. Generate an initial discussion with students about the selected issue, discussing some of the possible costs and benefits, and exploring it from a variety of perspectives.
- 2. Divide the students up into several groups based on the positions defined by the issue (e.g. land owner, community leader, developer, First Nations, environmental group, government). Establish a balanced variety of roles, with groups having conflicting values and concerns relating to the potential impacts of this issue. Have each group research and prepare their groups concerns and wishes for the area/issue in question. Tell students that they will be making a presentation representing their groups' position on the issue at a "public hearing" to be held in several weeks time in class.
- 3. Group members should work together to decide on their groups' concerns. Presentations should have strong arguments for the groups' position Limit presentation time per group accordingly (e.g., 5 8 minutes). Encourage students to use whatever media might support their case: maps, diagrams, photos, news articles, their own drawings, etc. Provide 2-3 weeks for students to compile their research and develop their presentations.



- 4. Provide students with the following outline for their presentations. Key issues that the group members need to address at the public hearing include:
- Who they represent;
- Their group position on the issue: what and why;
- Impacts of the issue: What happens to the environment/ water/ wildlife?
- What happens to logging/ fishing / mining / ranching (etc.) rights (if applicable);
- Impacts to the lifestyles of the people living in the region.
- 5. Public Meeting
 - Arrange the classroom to represent a meeting room or council chamber. As "chairperson", call the meeting to order and run the meeting, timing each groups' presentation and facilitating questions from the floor. After all testimony has been made and questions asked, adjourn the hearing.
- 6. Students should return to their groups, discuss the hearing, and decide whether they are or are not willing to compromise. Each group can select a decision maker who will represent the group.
- 7. Call the decision-making body to the table, and hold a vote. The decision can be made by voting or by consensus.
- 8. Following the decision, have a brief class discussion to summarize the pros and cons that emerged from the students' presentations. Identify and list the benefits and costs on the board, as a result of the decision on the chosen issue. Include effects on people, plants, animals and ecosystems (e.g., water, forests, ocean, air, etc.).

- 9. Out of role, discuss some of the following:
- What are some things you have learned about land use issues and decision-making? What factors influence it?
- What responsibilities do we have as citizens in helping make land use decisions?
- What is the importance of land use planning? How does it affect people, communities, wildlife, environment?
- 10. To extend the learning, have students write essays describing their own personal recommendation on the issue.



8. Celebration and Community Engagement

Description:

Students present their completed research and project work to another class, and/or community audience, and a celebratory event is held to showcase and highlight their efforts. (e.g., pizza party, potluck lunch or dessert/ cookie party, an outing, media coverage).

Rationale:

Celebration is an important component of action projects. Celebrations can take place during major project milestones or when the project is complete. Holding a celebration is a chance for students to showcase their work, and to give back to the community that provided them with the experiences and information that helped them with their research. It is also a chance to profile the issues and the community and encourage further action towards sustainable solutions.

Materials:

- Completed projects and presentations, an audience, venue, and food!

Stewards of the Future Toolkit

Procedure:

- 1. Discuss holding a celebration with the class as part of their project presentations. The celebration doesn't have to be big or complicated, and it's an important finale to students work. Student presentations could be given to other classes, the organization they worked with in their community, or the local Rotary Club. Other suggestions for highlighting student work include hosting a school / community event, writing a media story, putting up displays of student work in the school, the local library, mall, etc. If applicable, the displays could include class presentations of students' photographic projects from Activity 1: *Voices from the Land*.
- 2. Have students discuss what they would like to do as part of their celebration, and who they would like to invite. List all the key stakeholders, participants and community partners that students worked with.
- 3. Engage students in making it happen. Set a time and date, and arrange teams to help with preparations on budgets, invitations, logistics (i.e., equipment needed), food purchase/prep, media contacts (if applicable), timetable, etc..
- 4. Further civic engagement could include letters to the editor, presentations to city council, and meetings with local politicians about the issues and projects.

Adapted from C2C: Connecting to Conservation, a HCTF Secondary School program)

29

Appendices

A. Program Forms

- 1. Application Process and Checklist of Criteria
- 2. Stewards of the Future Application Form
- 3. Photo / Video Consent and Release Form
- 4. Project Summary Report: To complete for submission to Government House
- 5. Student Passport

B. Teacher/Educator Resources

- 1. Outdoor Group Management Tips
- 2. Outdoor Field Trip Planner Sheet
- 3. A Note on Conservation When Teaching Outdoors
- 4. Field Trip Checklist

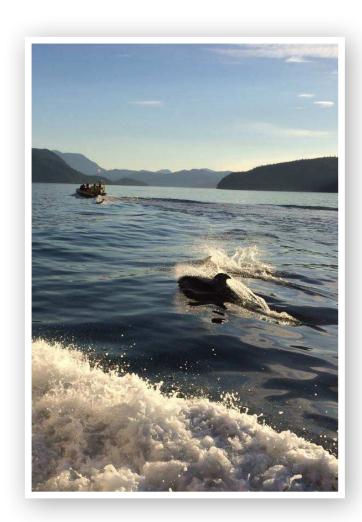
C. Links to BC Ministry of Education Curriculum Grades 9 - 12

D. Resources and References

- 1. Partners and Resources
- 2. List of Stewards of the Future Partners
- 3. Educator Resources & References
- 4. References

A. Program Forms

- 1. Application Process and Checklist of Criteria
- 2. Stewards of the Future Application Form
- 3. Photo / Video Consent and Release Form
- 4. Project Summary Report:
 To complete for submission to Government House
- 5. Student Passport



1. Stewards of the Future: Application Process and Checklist of Criteria

Please fill out the following Application Form to apply for the Stewards of the Future program. The form asks for some details on what issue(s) you would like to explore with your students, activities you hope to do, potential field study sites you would like to visit, and how the particular field trip(s) and activities will be hands-on. Other considerations to include in your application are linkages to your school, district or group goals, and community groups you hope to engage with.

Apply by Friday, January 23, 2015.

Review the Checklist below to see if your project is suitable!

√ Criteria: Applications Need To:

- explore community-based issues
- focus on a sustainability/stewardship/nature theme: e.g. agriculture, parks and protected areas, food security, energy, oil and gas, biodiversity, water quality, restoration, forestry, aquaculture, recreation.
- have clear objectives for why you want to explore issue(s)
- provide inquiry and hands-on learning experiences
- include hosting at least one guest speaker related to the issue
- ☐ include at least one outdoor field trip
- ☐ include what you will you use the funding for
- ☐ link activities to prescribed curriculum (if applicable)

Funding

Single class/group applications (from \$200 - \$800 /class/application*) are to be used for:

- bus transportation;
- field project materials, equipment, field guides and supplies (e.g., pH meter, nets, plants, shovels, nest boxes)
- outdoor field trip leader honorarium or program fee
- · teacher release time

*Note: Please only apply for the amount of funding you need for your specific project, as that will allow more classes and groups to participate in this initiative.

Requirements

Successful grant applicants must:

- Submit a Project Summary report with at least one photo by *Friday, May 29, 2015*.
- Participate in a brief post-program evaluation (either by phone or online).

Apply Now!

- Download and save an application form
- Open form with Adobe and complete application electronically
- Save and email to info@ bcgovhousefoundation.ca
- Applicants will be notified by Friday January 30, 2015.

Disbursements

Funds are provided by the Government House Foundation and are distributed by the Stewards of the Future Review Committee. Once the completed project plus at least one photograph has been submitted, teachers/leaders may apply for further available funds to be used for a celebration, community outreach activities, or continuation of the project.

*Note: you are welcome to participate in the program regardless of funding availability. Please see our Partners and Resources list, as some partners offer additional sources of funding.

2. Stewards of the Future: Application Form

1. Applicant Information:
Main Contact Name
EmailPhone Number
School/ Group Name
Address
2. Applicant Details:
Number of Students/Youth Participants
Grade level / Age
Number of other participating volunteers
Other potential community groups/organizations involved
3. Main Issue(s) to be Explored: List topics you would like to explore with your students: they can be community-based and/or part of the prescribed curriculum. (max. 100 words)
4. Describe the Objectives of the project: Why you want to do this with your students:
5. Field Trip Locations: (list name and location)
Links to Curriculum (if applicable)

Date: (dd/mm/yyyy)

Budget Summary:

	SoF grant	Other funding	
	Request	In kind	Cash
Transportation			
Field Trip Leader			
Teacher Release Time			
Project Equipment, Resources			
TOTALS			

Thank You! Please email or fax this completed form to:

Email: info@bcgovhousefoundation.ca

Fax: 250-387-2078

For information or support, please call: 250-387-2080

3. Stewards of the Future: Photo / Video Consent and Release Form

Student's Name	
	reby acknowledge and agree with the following:
audio and/or video recordings, sketche likeness, comments or other personal ir	nd the Stewards of the Future initiative may use photographs, es, notes or other materials that capture my child's image, voice, nformation (collectively, "Recordings"), whether created by or on on, or provided by me and/or others on my behalf.
relations and/or public promotion, inclu	ernment House Foundation for educational, editorial, public uding reproducing, modifying, making derivative works from, ng them, in whole or in part, in any manner that it wishes,
BY SIGNING BELOW I CONFIRM THAT I F CONDITIONS OF THIS CONSENT AND RI	HAVE READ, UNDERSTOOD AND AGREE TO THE TERMS AND ELEASE.
I am at least 19 years of age and I have	ngs is a person under the age of 19, I represent and warrant that the authority to, and I do hereby, agree in conjunction with or as myself, to all of the terms and conditions contained in this
SIGNED AND DELIVERED THIS	DAY OF, 20
Signature	Signature of Minor (if at least age 13)

Stewards of the Future Toolkit 35

4. Stewards of the Future: Project Summary Report

To the Teacher / Leader: Please provide a brief summary of your project using the template below, for submission to the Government House Foundation by

** Friday May 29, 2015

Name of Teacher(s) / Leader(s)
School / Group Name
Address
Grade(s)
Number of Students
Number of other participating volunteers
Other community groups/organizations involved
Cities continuality groups, organizations involved
Project Objectives
Main Issue(s) Explored
Guest Speaker(s)
duest speaker(s)
Tonic of their precentation
Topic of their presentation
Eigld Trip
Field Trip
Where we went
Date(s)

Activities: Describe what you did, what students were learning and any activities the students
were doing. (1-2 paragraphs)
Teacher Reflection: Describe what worked, what you would do differently, any observations about student learning or anything else to share. (1-2 paragraphs)
** Attach at least one photo of students participating in the project.
Please submit this form electronically as an attachment and email to:
Email: info@bcgovhousefoundation.ca

For information or support, please call: 250-387-2080

37

5. Stewards of the Future: Student Passport

The Stewards of the Future Student Passport is a separate downloadable checklist for students to access and fill out, in order to explore further stewardship opportunities, and be eligible for additional program recognition.

Note: This is an optional initiative – students do not have to complete the Passport in order to be part of the SoF program. The Passport allows students who would like to pursue further opportunities independently to do so, and to be recognized for their interest and participation.

Completing the Passport

Students who wish to participate can download the passport from the SoF website. They then take part in some of the listed activities and site visits applicable to their community, have the Passport signed by a teacher and/or leader / parent, and submit it to the Government House Foundation for additional recognition and a commemorative pin from the Lieutenant Governor. Wherever possible teachers/leaders are asked to send passports in as a batch for a group that is participating.

Submitting Students Passports

Passports can be scanned and submitted online via email to

Email: info@bcgovhousefoundation.ca

Fax: 250-387-2078

or mailed to: Stewards of the Future

Government House Foundation

1401 Rockland Avenue

Victoria, British Columbia V8S 1V9

Student Passport

Welcome! The Student Passport is part of the Stewards of the Future initiative, a program of Lieutenant Governor Judith Guichon. This passport demonstrates the bearer's commitment to activities that promote healthy land, with healthy people, in healthy communities.

Instructions:

Read through the checklist of activities and events, and complete at least 8 of the 11 items. There is no time limit for this, but items must be signed off by a teacher, supervisor or parent and a scan of the passport must be sent to Government House.

If you complete eight or more activities, get the Passport signed by a teacher or group leader and then send it in. You will receive a personal letter of recognition and a special pin from the Lieutenant Governor, and be listed on the Government House Foundation website as a Steward of the Future.

Stewards of the Future Passport

First Name	Last Name
School/Group	Teacher/Leader's Name
Date Issued	*Signature

Projects, Events and Site Visits: Check off the ones you have done!

Activity	Date	Details and Comment (Where/what/how/what I learned)	Witness Signature*
I attended a community meeting (e.g. city council, regional district, band council)			
2 I participated in a student or peer debate or discussion on a resource/environment issue			
3 I helped with an environmental project as a volunteer (e.g., stream, park, shoreline cleanup, invasive species removal) or visited a landfill or sewage treatment plant.			
4 I organized or worked with a local stewardship group on a project (e.g., recycling, school bottled water reduction, awareness event.			
5 I visited an ongoing and sustainable resource site (e.g., a ranch/farm/fish hatchery or tree farm)			
6 I visited or learned about an extractive or high impact resource development site (e.g., a mine, mill, gas/oil plant or hydro site)			
7 I listened to a guest speaker or watched a film discussing water or energy extraction.			
8 I listened to a guest speaker or watched a film discussing wildlife or biodiversity.			
9 I hiked, paddled, skied or cycled in a wilderness area or park (any non-motorized travel)			
10 I told someone about what I have learned from this program (e.g., teacher, parent, peer, young children) or wrote a letter, a blog or Facebook entry.			
11. Other - and event or site visit that is not on the list but matches the themes of this program			

^{*} A signature from a teacher, principal, group leader and/or parent is proof that the bearer has been actively engaged in activities, site visits, and/or projects in their school and community.

39

B. Teacher /Leader Tips

- 1. Outdoor Group Management Tips
- 2. Outdoor Field Trip Planner Sheet
- 3. A Note on Conservation When Teaching Outdoors
- 4. Field Trip Checklist



40

1. Outdoor Group Management Tips

Loss of control is an issue for most teachers and group leaders when thinking about taking students outside. Unfortunately, most students are not accustomed to be taken outside for any reason other than to "play" at recess - hence the term "recess syndrome" for the boundless energy and enthusiasm they often display. This energy can be overwhelming, and not productive for learning, leading to a less than successful outing. Here are some group management tips to help guide your outdoor experiences:

Set the Stage: Planning, Ground Rules and Clothing

Let students know what is expected of them. Send the teacher information beforehand to share with the class about where they'll be going, what they will be doing and what to wear. For example, good footwear i.e., no sandals or heels! and a wind / waterproof jacket are very important. Before heading out, ask students for suggestions for ground rules and agree on them as a group. Use a whistle, duck call or other audible signal to gather the group together, and let them know it's time to look and listen when they hear it.

Set Some Boundaries

Once outside, make sure all students can be seen and stress that they must be able to see you at all times. Set clear physical boundaries that students understand and can't wander beyond. For example: "Don't go past the big maple tree and the edge of the field", or "If I can't see you, you've gone too far". Use some rope or flagging tape to make sure the boundary areas are clear, to mark certain areas to protect from foot traffic, and to flag any "danger zones" where students might get injured. Try out the whistle to gather the group together, and agree on a meeting place where the group will gather when called.

Safety Rules

Review some basic safety rules with the group:

- Choose a buddy and keep them in sight all day.
- If you get separated from the group, Stay Put! Hug a Tree – stay in one place and the group will find you quicker.
- Ensure everyone is dressed properly, has adequate water and food with them, and knows who has the First Aid kit.

Use well - defined activities rather than loose explorations.

Gather the group together before each activity, explain and demonstrate the task, and set boundaries for exploration. Simple tools such as paint chips, magnifying glasses or toilet paper tubes as "scopes" help focus student's attention. Let them go while you mingle, admire and support their discoveries. End the activity back in a circle with a sharing and quick debrief. For longer outdoor stays, begin with a hike or an active game to allow students to burn off some energy and enable them to focus more easily on the more reflective activities.

Bad Weather Backup Plans

Have some backup plans in case of poor weather, such as a shelter or big tree to retreat to, or a tarp strung between trees. You can still get out and do activities in the rain or cold as long as people are dressed for it. Remember that paper "melts" in the rain – bring big zip lock bags to put any paper or books in. Bring along some "emergency ponchos" – big garbage bags with holes cut out for head and arms, some plastic grocery bags to stuff into leaky boots or shoes, and a few hats. If the weather is terrible, postpone the trip: no sense in making the experience a misery for all involved.

2. Outdoor Field Trip Planner Sheet

Use this sheet to check out your field trip site, use it to review site specifics, and make a final copy for all helpers coming with you.

Destination
Date of Field Trip
Description of Area
Driving Directions
Map/Chart (attach a MapQuest or Google Maps or photocopy that shows the route)
Meeting Spot (location/specifics)
Benefits of Using This Area
Space For Large Group Activity
Special Features
Description of Trails/Accessibility
Washrooms/Water
Rest and Lunch Spots
Potential Hazards/Precautions
Special Considerations (site and group)
Contingency Plans
Site Specific Emergency Contact Numbers
Is the site within Cell phone range?
Cell phone contact number(s)
Nearest Land Phone location
Nearest Medical Facility
Nearest Hospital
School phone number

3. A Note on Conservation When Teaching Outdoors

Effective environmental learning involves direct experience with the natural world, but care must be taken not to jeopardize the very life forms and environments we are learning from. These basic guidelines form part of a conservation ethic that should be an essential part of all outdoor programs. We have found that instead of "preaching" these guidelines to your class or group, it is much more effective to have them generate their own list through a brainstorming activity.

Stay on the Trail

This minimizes your impact on plant life and allows animals to adapt to human use of an area.

Patting Prevents Picking

Explore, feel, smell, and sense natural objects such as leaves, shells, tree branches and feathers, but do not pick any live plant material or remove things from their location: this is their home.

Turn the Rocks or Logs Back Over

When exploring under a rock or log, do so gently. Try not to crush plants and animals that may be living on, beside or under it, and put the rock or log back the way it was when you've finished investigating.

Fill in Any Holes.

Whether digging on a beach for burrowing animals or exploring the soil layers of a forest floor, fill in any holes you create. Plants, insects and animals living in the area will be disturbed by piles of dirt covering their burrows and trails.

Wildlife Viewing Etiquette

Observe wildlife as quietly as possible – stress is harmful to animals, so respect their space and habitat. Never chase animals, touch or feed them. Remember that birds and animals need resting periods during the day - use binoculars and keep a respectable distance away.

Leave all Specimens, Alive or Dead, in Their Natural Habitat.

Do all of your discovering on-site – observe living things in their home place. Do not move plants or animals from one location to another, and do not take any organisms away. Dead leaves, fungi, shells of animals, stones, and seeds all have a role to play in their ecosystem. Don't allow activities that stress collecting, pressing and drying of specimens: their teaching potential is limited, and students can demonstrate the same skills of identification, observation, and categorizing with live specimens in their natural habitat.

Leave No Trace.

In every way, try to leave the environment and its inhabitants unchanged by your visit. Pack out all garbage, even though you may not have brought it in. Bring along some garbage bags, and protect garbage collectors' hands with small plastic bags or gloves.

4.	Field Trip Checklist		Do a site visit to avoid any surprises and get familiar with the site.
Thi	ngs to Do Before, During and After a Trip		Do some pre-trip activities that lead in and prepare students (sensory awareness)
Pre	Send student waivers to parents and get		Share the day's agenda and site layout with your class.
	them returned. Hand out list of things students need to bring (e.g., journals, raingear, hat, sun screen, bug repellent, water, snacks, lunch, "sit-upons", solid footwear) NO dress shoes, heels, open toes or sandals, no cell phones or electronic		Get a map that includes site layout plus parking, washrooms, picnic sites etc Scheduling at the site: bus return timesnack breaks lunch
	devices.		constrained by time
	Transportation: parent drivers (organize car-pooling and maps)		Prepare payments if needed (program/parking).
	Organize bus and any money needed from students	Th	e Day of the field trip
	Walking: outline route		Share itinerary and map with drivers and
	Parent / Volunteer helpers: send them all an outline of their expectations /tasks		leaders: include contact numbers in case anyone gets lost or delayed.
	Document emergency procedures and phone numbers		Class list - check students off as class arrives and departs site.
	First aid kits and any student medication:		Contingency plans for inclement weather:
	who will carry them Sick kid plan: Who will handle this if it arises		Review the "what if" procedures if anyone gets separated.
	on the trip:		Take lots of pictures!
Pla	anning	Af	ter the field trip
	Make name tags for all students and volunteer helpers / other teachers		Follow-up and Celebration: Summarize learning experiences with a class mural,
	Organize a buddy system.		displays, photos, posters, stories, poems, maps
	Make student group configurations for small group work.		Reflection: Did you achieve your outcomes
	Volunteer helpers: check that they know their roles and responsibilities.		as planned? If not, is that necessarily a bad thing? Positive elements / challenges of the trip. Things to do differently next time.

C. BC Ministry of Education Curriculum

Please Note

This program is not intended to replace or compete with any existing curriculum. However, all activities and resources meet the Ministry of Education's prescribed learning outcomes for many secondary level courses. See the *Table of Prescribed Learning Outcome Connections for Grades 9 - 12* for a full listing.



NOTE to Educators:

Some Background: Curriculum Revisions are Happening in BC

Aligning any supplementary education program, project or field trip to the prescribed curriculum is an essential stage in its adaptation and implementation by teachers: it needs to fit with what they are teaching, and meet key learning requirements.

The BC Ministry of Education has been undergoing an extensive process of curriculum consultation, review and transformation since 2010, based on current research and 21st century learning skills, to better meet the needs of all students. BC has a number of new curriculum initiatives underway and several recent ones completed; positioning and linking this resource properly can accelerate its adoption and use.

Curriculum transformation is a lengthy process, meaning teachers will be using the current Learning Outcomes (2008 – 2011) and exploring the draft redesigned curriculum packages for several years to come. While this presents a challenge for both curriculum developers and teachers, it also provides a great opportunity to design a coherent approach to undertaking stewardship projects with students! It seems that the new draft curriculum has more "room" for teacher innovation and adaptation, and for exploring the big ideas and lifelong learning skills that action projects provide – good news for project-based learning and stewardship projects.

The First Peoples Principles of Learning

(BC Ministry of Education, 2007) also provide great options for project-based learning opportunities, as indigenous pedagogy supports learning by doing, learning through authentic experiences and individualized instruction, and learning through enjoyment – all elements of the Stewards of the Future program.

Table: Prescribed Learning Outcomes Links for Grades 9 – 12

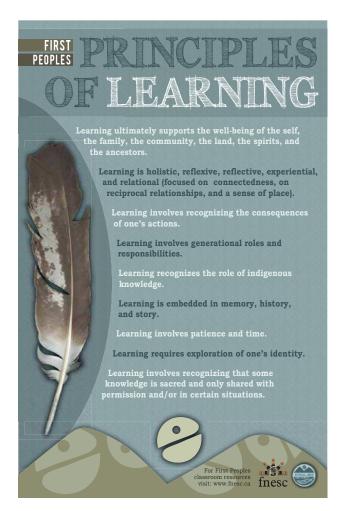
NOTE: Courses and learning outcomes with the strongest links to stewardship projects and activities are highlighted in **blue** text below.

Draft Grade 9 learning standards are also included for currently existing courses.

Transforming Curriculum and Assessment: The New Draft Curriculum Grade 9

The draft BC curriculum prototype includes five design elements (curriculum organizers, big ideas, learning standards, competency links, and implementation links). These elements are intended to make curriculum more flexible, to better enable teachers to innovate and personalize learning, provide more focus to higher order learning, key concepts and enduring understandings (big ideas), and integrate Aboriginal worldviews and knowledge. More details can be found at https://curriculum.gov.bc.ca.

As of this writing, there are currently four curriculum drafts available that are applicable to this projects' grade levels: *Grade 9: English Language Arts, Social Studies, Mathematics, and Science.* Their Big Ideas and Learning Standards are cross-referenced with the current Grade 9 course Prescribed Learning Outcomes in the table below, to provide a map to using both documents to support stewardship, action projects and outdoor learning.



Grade 9

Course	Prescribed Learning Outcomes
Business Education	 explain how factors of production including land, labour, capital, and entrepreneurship affect business decision making outline methods of resource allocation in various economic systems contrast various forms of business ownership explain the role of research and innovation in entrepreneurship outline and develop plans to overcome obstacles involved in starting a business
Physical Activity	 participate in physical activities for a minimum of 30 minutes during each school day
English Language Arts	 express ideas and information in a variety of situations and forms to: explore and respond, recall and describe, narrate and explain, persuade and support, engage and entertain. select and use a range of strategies to interact and collaborate with others in pairs and groups, including: selecting methods for working together effectively: listening actively; contributing ideas and recognizing the ideas of others demonstrating awareness of diverse points of view – reaching consensus or agreeing to differ select and use a range of strategies to prepare oral communications, express ideas and information New Draft Learning Standards/Curricular Competencies (2013) Analyze the accuracy, reliability, and relevance of information Use oral language to explore and express ideas, communicate clearly, and evoke emotion Assess and adjust communication to improve its clarity, effectiveness, and impact Present ideas and information and adjust point of view, voice, and tone for a variety of purposes Develop and defend a position with supporting evidence
Health & Career Education	 describe ways of exploring career options (e.g., job shadowing, mentoring, volunteering)

Math

New draft Learning Standards/Curricular Competencies (2013)

Big Ideas:

- Through inquiry, we explore mathematics flexibly, creatively, and reflectively.
- Topics in mathematics are interconnected and interrelated

Learning Standards:

- Connect mathematical concepts to each other and make mathematical connections to the real world
- Explore, demonstrate, apply, and connect mathematical concepts incorporated in other disciplines

Science

- demonstrate competence in the use of technologies specific to investigative procedures and research
- describe changes in the properties of matter
- relate electrical energy to power consumption

New draft Learning Standards/Curricular Competencies (2013)

Big Ideas:

• Earth is composed of four interacting spheres through which matter cycles

Learning Standards:

- Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest
- Make observations aimed at identifying their own questions, including increasingly abstract ones, about the natural world
- Formulate multiple hypotheses and predict multiple outcomes
- Collaboratively and individually plan, select and use appropriate investigation methods, including field work and lab experiments, to collect reliable data.
- Select and use appropriate equipment, including digital technologies, to systematically and accurately collect and record data.
- Seek and analyze patterns, trends and connections in data, including describing relationships between variables and identifying inconsistencies
- Use knowledge of scientific concepts to draw conclusions that are consistent with evidence
- Describe specific ways to improve the investigation methods and the quality of the data.
- Communicate scientific ideas, information and perhaps a suggested course of action, for a specific purpose and audience

Social Studies

- assess the reliability, currency, and objectivity of different interpretations of primary and secondary sources
- identify and clarify a problem, an issue, or an inquiry
- co-operatively plan, implement, and assess a course of action that addresses the problem, issue, or inquiry
- defend a position on a controversial issue after considering a variety of perspectives
- plan, revise, and deliver formal oral and written presentations
- assess the role of geographical factors in the development of trade and settlement in Canada and other colonies
- construct, interpret, and use graphs, tables, grids, scales, legends, contours, and various types of maps
- demonstrate understanding of the ways in which Aboriginal people interact with their environment
- describe and compare North America's diverse geographical regions

New draft Learning Standards/Curricular Competencies (2013)

Big Ideas:

- Change is driven by multiple causes and results in multiple consequences
- The physical environment influences the nature of political, social, and cultural development.

Learning Standards:

- Use Social Studies inquiry processes: ask questions, gather, interpret and analyze ideas, and communicate findings and decisions.
- Assess and compare the significance of people, places, events and developments over time and place, and determine what they reveal about issues in the past and present.
- Determine and assess the long and short-term causes and consequences and the intended and unintended consequences of an event, decision, or development.
- Explain different perspectives on past or present people, places, issues and events and distinguish between worldviews of today and the past.

Grade 10

Course	Prescribed Learning Outcomes
Business Education	 apply interpersonal and teamwork skills to generate alternative solutions to business problems or challenges outline methods used to facilitate and predict economic development evaluate how trends in society affect employment in the marketing sector and in education outline factors contributing to product value
Daily Physical Activity	participate in moderate to vigorous physical activity for a minimum of 150 minutes per week
English 10 First Peoples	 speak and listen to synthesize and extend thinking by: personalizing, explaining relationships, applying new ideas, transforming existing ideas and contextualizing ideas, information and understandings. use meta-cognitive strategies to reflect on and assess writing and representing by: making connections to First Peoples principles of learning
English Language Arts	 express ideas and information in a variety of situations and forms to: explore and respond/ recall and describe/narrate and explain/argue, persuade, and support/ engage and entertain. select and use a range of strategies to interact and collaborate with others in pairs and groups select and use a range of strategies to prepare oral communications speak and listen to synthesize and extend thinking, by: personalizing ideas and information/ explaining relationships among ideas and information, applying, transforming and contextualizing new ideas and information.
Graduation Transitions	 demonstrate the skills required to work effectively and safely with others and to succeed as individual and collaborative workers, by: participating in at least 30 hours of work experience and/or community service describing the duties performed, the connections between the experience and employability/life skills, and the benefit to the community and to the student

Home identify and describe occupations and careers related to adults / families/ **Economics:** living environments **Family** describe a variety of food marketing techniques Studies/ identify factors that affect food production and supply, especially in Canada Food and today Nutrition describe the cultural origins of menus, recipes, ingredients, meal etiquette of variety of ethnic, regional, and local cuisines describe food-related occupations and careers compare the use of information technology in different job settings within the **Information Technology** community demonstrate an awareness of the impact of electronic resources on education, careers, and recreation evaluate the impact of information technology tools on the workplace, on individuals, and on society participate daily in moderate to vigorous physical activity to enhance fitness **Physical Education** apply leadership in a wide range of physical activity situations relate personal attributes and interests to education and career planning **Planning** relate labour market information (e.g., types of employment, required skills and education, salary range) to careers of interest Science Processes: demonstrate safe procedures; perform experiments using the scientific method; represent and interpret information in graphic form demonstrate scientific literacy; demonstrate ethical, responsible, cooperative behaviour. demonstrate competence in the use of technologies specific to investigative procedures and research Sustainability of Ecosystems: explain the interaction of abiotic and biotic factors within an ecosystem assess the potential impacts of bioaccumulation explain various ways in which natural populations are altered or kept in equilibrium evaluate possible causes of climate change and its impact on natural systems Social Skills and Processes: **Studies** apply critical thinking skills, effective research skills, effective written, oral, and graphic communication skills, individually and collaboratively describe the physiographic regions of Canada and the geological processes that formed these regions

Grade 11

Course	Prescribed Learning Outcomes
Applied Skills	 analyse and use appropriate problem-solving strategies and critical thinking when resolving problems in a variety of contexts identify and apply appropriate knowledge, skills, and attitudes when making choices and defending decisions use appropriate criteria and standards to assess and evaluate products, services, systems, and ideas
	 select appropriate information gathering and communication tools when solving problems related to applied skills areas
Biology 11	 demonstrate safe and correct technique for a variety of laboratory procedures design an experiment using the scientific method interpret data from a variety of text and visual sources analyse the functional inter-relationships of organisms within an ecosystem Bacteria, Plant and Animal Biology: field opportunities
Business Education	 demonstrate a willingness to participate as a team member demonstrate acknowledgment of and respect for the different attributes, opinions, and roles of team members use marketing research to identify target markets for a variety of products and services identify how retailers in various locations inform target markets of their products, services, or ideas describe how cultural values influence and are influenced by various marketing strategies
Career and Personal Planning	 develop students' abilities to plan and make decisions systematically; gather and record the information needed to make and carry out educational, career, and personal plans; and to put plans into effect, monitor and evaluate them, and make refinements as necessary. analyse changes taking place in the economy, environment, and society, as they relate to current labour-market information evaluate the contributions to society of various types of work complete 30 hours of Work Experience that relates to career, educational, and personal goals

Earth Science 11

- differentiate between rocks and minerals
- assess the extraction and use of geological resources
- describe the function of the hydrologic cycle
- relate the processes associated with weathering and erosion to the resulting features
- describe features and processes associated with physical oceanography

Graduation Transitions

- engage in at least 150 minutes per week of moderate to vigorous physical activity
- participate in at least 30 hours of work experience and/or community service; describing the duties performed, the connections between the experience and employability/life skills, and the benefit to the community and the student

Science and Technology

Agriculture

- analyse the environmental, social, and economic significance of agriculture at the local, provincial, and global levels
- outline components of agricultural systems and ways of enhancing agriculture production
- investigate current practices related to the development of commercial agriculture products
- illustrate various roles of technology in agricultural practices
- analyse challenges and opportunities faced by agriculture industries in BC

Natural resources and the Environment

- describe the major natural resources found in BC
- evaluate methods used in the extraction, processing, use and management of a locally used or produced resource
- discuss the impact of society on natural resource management and the environment
- analyse the impact of technologies on the environment

Transportation

- describe the roles of transportation in society and the effects transportation has had on society
- identify key scientific and technological changes that have taken place in transportation
- analyse features incorporated into particular types of transportation

Social Studies

- apply critical thinking—including questioning, comparing, summarizing, drawing conclusions, and defending a position—to make reasoned judgments about a range of issues, situations, and topics
- demonstrate effective research skills, including: accessing and assessing information, collecting and evaluating data, organizing and presenting information, citing sources
- demonstrate skills and attitudes of active citizenship
- Human Geography: assess environmental challenges facing Canadians: global warming, ozone layer depletion, fresh water quality and supply

Sustainable Resources 11/12

Agriculture

- analyse the environmental, social, and economic significance of agriculture at the local, provincial, and global levels
- outline components of agricultural systems and ways of enhancing agriculture production
- assess current practices related to sustainable management of agricultural resources in BC
- investigate current practices related to the development of commercial agriculture products
- illustrate various roles of technology in agricultural practices
- analyse challenges and opportunities faced by agriculture industries in British Columbia

Forestry

- analyse the environmental, social, and economic significance of forestry and related industries at the local, provincial, and global levels
- outline the dynamics of forest ecosystems
- assess current practices related to the management of sustainable forest resources in BC
- investigate current practices related to the development of commercial forest products
- illustrate various roles of technology in forest practices
- analyse challenges and opportunities faced by forest industries in BC

Mining

- analyse the environmental, social, and economic impacts of acquiring mineral resources, and hydrocarbons from fossil fuels, at the local, provincial, and global levels
- describe methods used for the exploration, extraction, and processing of hydrocarbon and mineral resources
- assess current practices related to the sustainable management of hydrocarbon and mineral resources in BC
- investigate current practices related to the development of hydrocarbon and mineral resource products
- illustrate various roles of technology in the exploration, extraction, and processing of hydrocarbon and mineral resources

Tourism

- classify the components of the five industries of the tourism sector
- compare the BC tourism regions
- describe the importance of sustainable tourism
- describe the tourism industry
- explain the importance of tourism

Grade 12

Course	Prescribed Learning Outcomes
Biology 12	 design an experiment using the scientific method interpret data from a variety of text and visual sources describe the characteristics of water and its role in biological systems
Outdoor Education 11/12	Demonstrate an understanding of the processes involved in organizing events and programs in the school and community and identify the benefits of participation and volunteer work in the community
	 Adapt physical activities to minimize environmental impact Select an alternate environment activity in the community to develop a personal functional level of fitness
	 Select and apply problem solving strategies when planning and leading others in specific activities
	• Apply appropriate rules, routine, procedures, and safety practices in a variety of activities and environments
	• Demonstrate self respect, confidence, and positive behaviours that show respect for individual abilities, interests, gender, and cultural backgrounds
	Demonstrate and describe qualities of leadership related to physical activity

Geography 12

- assess the environmental impact of human activities, including: energy production and use, forestry, fishing, mining, agriculture, waste disposal, water use
- assess the various considerations involved in resource management, including: sustainability, availability, social/cultural consequences, economic consequences, political consequences
- describe the major interactions of the four spheres: atmosphere, biosphere, hydrosphere, lithosphere
- explain the following five themes of geography: location, place, movement, regions, human and physical interaction
- describe the features and processes associated with: running water, ground water, glaciers, wind, waves
- describe the features and processes associated with weathering and mass wasting
- analyse interactions between human activity and the atmosphere, with reference to: global climate change, ozone depletion, acid precipitation
- explain how climate affects human activity
- analyse the interactions between human activity and biomes, with reference to: deforestation, desertification, soil degradation, species depletion
- describe how vegetation adapts to environmental conditions
- outline characteristics of the Earth's major biomes
- apply effective written, oral, and graphic communication skills to geography topics
- demonstrate geographic literacy through: analysis of geographic data or information to assess reliability and identify trends and relationships
- describe the geographic applications of current information and imaging technologies

Geology 12

- trace the origins of geological resources including mineral deposits, coal, petroleum, and natural gas
- explain the significance of geological resources and their economic development
- analyse features and processes associated with weathering and erosion
- analyse features and processes associated with stream erosion and deposition
- evaluate the importance of ground water
- explain the processes and features associated with glaciation

First Nations 12

- analyse the relationship of First Nations peoples with the natural world
- explain the significance of traditional education with respect to land and relationships
- apply critical thinking including questioning, comparing, summarizing, drawing conclusions, hypothesizing, and defending a position to make reasoned judgments about a range of issues, situations, and topics
- demonstrate skills and attitudes of active citizenship, including ethical behaviour, open-mindedness, respect for diversity, and collaboration
- demonstrate effective research skills

Social Justice 12

- demonstrate understanding of concepts and terminology of social justice
- demonstrate effective research skills
- apply critical thinking skills to a range of social justice issues, situations, and topics
- analyse selected social justice issues from an ethical perspective
- assess how belief systems can affect perspectives and decisions in relation to social justice issues
- demonstrate attributes and behaviours that promote social justice, including recognizing injustice, fair-mindedness, embracing diversity, empathy, taking action

D. Educator Resources and References

59

Environmental Education and Stewardship Organizations and Resources

This is a short list of organizations and resources that can support educators and youth in exploring, developing and carrying out project-based learning activities in their communities. The list is not meant to be exhaustive, but rather to provide a starting point for generating ideas and providing support. The Stewards of the Future Partners list (hyperlink) also provides a wide range of supporting groups and resources.

BC Hydro's Energy Ambassadors Grades 9 – 12

https://www10.bchydro.com/About/resources

An awareness, action and leadership program about energy sustainability for secondary school students. Students are empowered to lead real changes by forming a team with teacher sponsors and district facilities mentors to investigate and identify areas for conservation and sustainable action within the school and district.

BC Ministry of Education Green Schools Initiative

Includes: http://www.bced.gov.bc.ca/greenschools/

- BC Green Games is a province-wide competition for students, designed to motivate environmental action, enable sharing, and reward and celebrate the green efforts of schools in B.C.
- Sustainable Schools Best Practices Guide

 Ideas for making schools environmentally sustainable http://www.bced.gov.bc.ca/ greenschools/pdfs/sustbestpractices.pdf

Check Your Head (Vancouver, BC)

Check Your Head (CYH) is a youth-driven notfor-profit organization based in Vancouver that educates and activates young people on various social issues. Extensive list of activist / social justice Resources (books, media, online, movies)

http://checkyourhead.org/resources/

Community Mapping Network

http://cmnbc.ca/

The CMN helps communities in British Columbia map sensitive habitats and species distributions using customized data entry and digitizing tools. The Atlas Gallery now has over seventy user-friendly atlases.

Environmental Youth Alliance: (Vancouver, BC)

EYA is a local, youth-driven non-profit that works to create a better sustainable future through grassroots projects in urban environments, www. eya.ca

Good Teacher Resources on school gardening activities, links to funding and related groups.

http://www.eya.ca/teacher-resources.html

Evergreen

Mission: Inspiring action to green cities: focus on four key areas: Greenspace, Children, Food and CityWorks. Great resources on school and community gardens.

http://www.evergreen.ca

GLOBE program

Global Learning and Observation to Benefit the Environment – a worldwide hands-on, primary and secondary school-based science and education program.

http://www.globe.gov/home

Green Learning: The Green Learning Canada Foundation provides teachers with free, high quality online education programs about energy and sustainability. Programs are comprehensively researched and tested, include extensive data bases and resources, and include many hands-on projects (e.g. solar ovens, wind turbines, home audit processes) that are relevant to students' concerns, curriculum-linked, and promote environmental stewardship. www.greenlearning.ca

The Jellyfish Project: (Vancouver, BC)

The JFP brings together youth, education providers, action projects and community partners through the power of music and live performance by the rock band Mindi Beach Markets. See their draft teacher resource guide on youth engagement and a six week home audit project.www.thejellyfishproject.org

PlantWatch

PlantWatch is part of the national NatureWatch series of volunteer monitoring programs designed to help identify ecological changes that may be affecting our environment. The program enables "citizen scientists" to get involved by recording flowering times for selected plant species and reporting these dates to researchers.

http://www.naturewatch.ca/english/plantwatch/intro.html

Wild BC / HCTF Education

http://wildbc.org

Wild BC has a province-wide network of professional facilitators to support student project work, funding available for outdoor action projects, and a wide range of education resources for K – 12 students. Resources that are particularly relevant include:

- Get Outdoors! An Educator's Guide to Outdoor Classrooms in Parks, School grounds and other Special Places. (2010) Parks Canada and Wild BC. Staniforth.
- Leap into Action! Simple Steps to Environmental Action (2004). BC Conservation Foundation and Wild BC. Staniforth.
- GO Grants! provides grants to K-12 schools for transportation, project materials and program fees that support outdoor learning experiences.

Wildlife Tree Monitoring

http://www.wildlifetree.org/aboutwits.htm

WiTS supports volunteers who are interested in observing nest trees and documenting wildlife usage.

Youth 4 Action: Metro Vancouver Youth Leadership Model

Youth4Action aims to support youth leaders across Metro Vancouver to achieve their vision and actions for sustainability and making real change in their schools and communities.

http://www.metrovancouver.org/REGION/YOUTH4ACTION/Pages/default.aspx

Many online Tools for Action to support youth taking action, including online energy calculators, manuals, how to write letters, make phone calls, and do environmental projects. http://www.metrovancouver.org/region/teachers/Pages/K-12Resources.aspx

2. Resources for Project-based Learning / Youth Engagement:

Here are some great FREE resources to download, that support getting students outside and engaged in community-based action projects.

Adopt a Watershed

http://water.epa.gov/action/adopt/index.cfm

Association of Fish and Wildlife Agencies

Outdoor Skills Education Handbook. A Guide for Developing and Implementing School-based Outdoor Skills Education (2011) and Stewardship Education: Best Practices Planning Guide.(2008) http://jjcdev.com/~fishwild/?section=conservation_education_toolkit

Buck Institute for Education:

a range of resources around eco-literacy, experiential and place-based learning. http://www.bie.org

http://www.ecoliteracy.org/strategies/place-based-learning

8 Essentials for Project-Based Learning:

http://www.bie.org/tools/freebies/8_essentials_for_project-based_learning

Canadian Youth Action Guide for Agenda 21

http://lsf-lst.ca/en/projects/youth-taking-action/agenda-21-action-guide

National Parks Service & Public Lands Institute:

Connecting Kids to Conservation: A Resource to help you plan conservation projects with youth. Projects, planning tips, case studies and funding sources for involving youth in conservation. http://www.kidstoconservation.org/

Pacific Education Institute:

Excellent resources on systems thinking, project based learning and outdoor learning. http://www.pacificeducationinstitute.org

Field Investigations: Using Outdoor Environments to Foster Student Learning of Scientific Processes

Sustainable Tomorrow-Applying Systems Thinking to Environmental Education Curricula for Grades 9-12

Field Investigations: Using Outdoor Environments to Foster Student Learning of Scientific Processes

Protecting Our Sacred Waters:

Supporting Educators and Youth Program Facilitators in Bringing Aboriginal Ways of Knowing into Community Action Planning

http://www.lsf-lst.ca/media/FNMI-Protecting_our_Sacred_Water_-_FINAL.pdf

3. References

Bauer, et al, (2009). "From Learners to Leaders: Using Creative Problem-solving in Environmental projects." Green Teacher: Teaching Green: *The High School Years* New Society Publishers.

Beane, J.A. (1997). Curriculum integration. New York, NY: Teachers College Press.

Bell, Stephanie (2010). "Project-based Learning for the Twenty-first Century: Skills for the Future." *Clearing House* 83, 39-43, 2010. Taylor and Francis Group.

Buck Institute for Education http://www.bie.org

Cirkony, Connie (2012). "Environmental Learning in British Columbia: A Grounded Theory Exploration of Teachers' Practices" (Master's Thesis). Excerpt from Chapter 2 Literature Review: Benefits of Environmental Education p. 31-35.

Duffin, Michael. *Place-based Education & Academic Achievement*. PEER Associates, Inc. Nov 2005.

Hammond, William (1997). "Educating for Action: A Framework for Thinking about the Place of Action in Environmental Education". *Green Teacher*, Winter 1996/97.

Hoffman, Jennifer and Susan Staniforth (2007). *The Green Street Guide to Authentic Youth Engagement*. With contributions fro the Green Street Youth Steering Committee. http://www.green-street.ca/files/GreenStreetYouthEngagementManual.pdf http://www.green-street.ca/

Kellert, Stephen R. (2005). "Nature and Childhood Development." In *Building for Life: Designing and Understanding the Human-Nature Connection*. Washington, D.C.: Island Press.

Larmer, John and John R. Mergendoller (2012). "7 Essentials for Project-Based Learning", *Educational Leadership*, 68 (1). March 2012 ASCD. www.ascd. org

Maller, C., Townsend, M., Pryor, A., Brown, P., & St. Leger, L. (2006). "Healthy nature healthy people: 'contact with nature' as an upstream health promotion intervention for populations". Health Promotion International, 21(1), 45-54.

Pacific Education Institute http://www.pacificeducationinstitute.org

Pomponio, Roberta (2011). Blue Ridge Middle School. *Placed Based Education*. http://www.lcps.org/Page/68238

Ponto, Coleen and Nalani Linder. (2011). Sustainable Tomorrow: A Teachers' Guidebook for Applying Systems Thinking to Environmental Education Curricula. Pacific Education Institute. http://www.pacificeducationinstitute.org

Smith, G. A. (2002). "Place-based education: Learning to be where we are". The *Phi Delta Kappan*, 83(8), 584-594.

Smith, Gregory & Sobel, David (2010). *Place- and Community-Based Education In Schools*. Routledge. New York.

Sobel, D. (2004). *Place-Based Education, Connecting Classrooms and Communities,* Orion Nature Literacy Series Number 4.

Staniforth, Susan. (2004) *Leap into Action! Simple Steps to Environmental Action* BC Conservation Foundation and Wild BC. http://wildbc.org

Stewards of the Future: Partners and Resources

The following list includes provincial and regional partner groups that are supportive of the Stewards of the Future initiative, and will provide educators with assistance and support in implementing the program. Note that they are listed here under general subject categories to help in identifying their main areas of work, but many groups fall under several categories.

Check the categories to find subject-specific opportunities and groups able to support field trips, guest speakers and projects.

If you encounter any difficulties with this resources list, please contact <u>info@bcgovhousefoundation.ca</u>

Categories:

Agriculture
Energy
Forestry
Invasive Species
Marine
Parks
Wetlands
Wildlife
Youth Leadership

ADDITIONAL FUNDING PARTNERS





Funding up to \$1000 is available for projects in a provincial park or protected area. This funding may be used for transportation, equipment, honoraria for subject matter experts, teacher on call costs. Please use the SOF application, but be specific that your project occurs in a park or protected area.

Eva Riccius, Manager
Eva.Riccius@gov.bc.ca
http://www.env.gov.bc.ca/bcparks



The Pacific Salmon Foundation's Community Salmon Program is a grantmaking program that supports volunteer—driven organizations that undertake salmon conservation and restoration projects in British Columbia and the Yukon. Contact our Salmon Programs staff to learn more about applying for the Community Salmon Program: salmon@psf.ca

Apply for a grant: **CSP Application**

www.psf.ca

https://www.psf.ca/what-we-do/community-salmon-program

STEWARDS OF THE FUTURE MAIN POINT OF CONTACT

GOVERNMENT HOUSE FOUNDATION						
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs	
Province-wide	Yes □ No 🗵		Yes ✓	No □	Yes ☑	No □
The Government House Foundation is the primary point of contact for Stewards of the Future. If you have any questions at all, please don't hesitate to contact me.						
Abby Pollen, Provincial Program Coordinator 250-356-1050						
info@bcgovhousefoundation.ca						
www.bcgovhousefoundation.ca						

AGRICULTURE

BC ASSOCIATION OF FARMER'S MARKETS						
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs	
Province-wide	Yes ☑ No □		Yes □	No 🗵	Yes ☑	No □
We dare to dream of a world where farming is synonymous with opportunity. We educate, engage and inspire people to create a vibrant farming sector in BC, one that nourishes and supports our natural environment and communities.						
Elizabeth Quinn, Executive Director 604-734-9797						
elizabeth.quinn@bcfarmersmarket.org www.bcfarmersmarket.org						

MINISTRY OF AGRICULTURE - BC AGRICULTURE IN THE CLASSROOM					
Region	Can Provide Speakers Can Host Visits Have Funded Programs				
Province-wide	Yes ☑ No □	Yes □ No 🗵	Yes ☑ No □		
BC Agriculture in the Classroom promotes the value of agriculture, sustainable food systems and the protection of BC's agricultural resource base. They provide educators and students with quality educational resources, programs, and information that highlight agriculture as an important part of our economy and way of life.					
Lindsay Babineau, Project Coordinator					
Lindsay Babino	au, i roject occiantator				
Lindsay Babines Lindsay.Babines www.aitc.ca/bc	au@gov.bc.ca				

BC 4-H COUNCIL Can Provide Speakers Can Host Visits **Have Funded Programs** Region Yes ✓ Delta Yes ☑ No 🗆 Yes ☑ No □ No □ The 4-H program provides young people with an opportunity to learn how to become productive, self-assured adults who can make their community and country a good place in which to live. This is fostered through project and program work, experiences with their 4-H club members and leaders and their participation in district, regional and even provincial programs. Kevin Rothwell, Manager

Kevin Rothwell, Manager 250-545-0336 manager@bc4h.bc.ca http://www.bc4h.bc.ca

DELTA FARMLAND AND WILDLIFE TRUST							
Region	Can Provide Speakers Can Host Visits Have Funded Programs						
Delta	Yes ☑	No □	Yes ☑	No 🗆	Yes ✓	No □	
promote the sus bringing conser provide farmers	DF&WT's Stewardship Programs integrate research, education, and financial incentives to promote the sustainable use of agricultural land within the lower Fraser River delta by bringing conservationists and farmers together as "Partners in Stewardship." These programs provide farmers with cost-share funding to establish wildlife habitat and/or invest in long term soil fertility on their farms.						
Christine Terp	sma, Prograr	m Coordinate	or				
604-940-3392							
christine@delta							
http://www.delt	afarmland.ca	L					

		IDG & EXHIDIMIONG					
BC ASSOCIATION OF AGRICULTURAL FAIRS & EXHIBITIONS							
Region	Can Provide Speakers	Can Host Visits	Have Funded Programs				
Province-wide	Yes ☑ No □	Yes ☑ No □	Yes □ No 🗵				
related events s agriculture in co Janine Saw, Exe 778-574-4082	jbsaw@bcfairs.ca						
Ann Siddall, President asiddall2012@gmail.com							
Keith Currie, Vice President KCurrie@comoxvalleyecho.com							

AGRICULTURE	TURE YOUTH DEVELOPMENT PROGRAMS							
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs			
Province-wide	Yes ☑ No	No □ Yes □ No ⊠		Yes □	No 🗵			
British Columbia regional Agrolo	The Agriculture Youth Development Program is active in all major agriculture communities of British Columbia to foster agri-food economic development opportunities and share with regional Agrologists in the regional delivery of environmental sustainability and resource development programs.							
Pat Tonn, Youth 1-888-221-7141 Pat.Tonn@gov.k	n Development Mana	ger						

BC CATTLEMEN'S ASSOCIATION							
Region	Can Provide Speakers		Can Host Visits		Have Fu	nded Programs	
Province-wide	Yes ✓	No \square	Yes ☑	No □	Yes □	No 🗵	
maintain a health by strong envirous industry in B.C. (FRISP) and an a protecting the la	BC Cattlemen's Association advocates on a wide range of issues for ranchers in order to ntain a healthy cattle industry that provides quality beef products to consumers, is guided strong environmental stewardship, and enhances strategic alliances within the agricultural astry in B.C. Programs such as the Farmland Riparian Interface Stewardship Program SP) and an annual environmental stewardship award show B.C. ranchers' commitment to ecting the land, marketing a world-class high quality beef product, and ensuring the ainability of the industry for generations to come.						
250 573 3611	Kevin Boon, General Manager 250 573 3611 bccattle@cattlemen.bc.ca						
250-573-3611	White, Public Affairs & Marketing Programs Coordinator Cattlemen.bc.ca Cattlemen.bc.ca						

BC AGRICULTU	RE COUNCII	1				
Region	Can Provid	e Speakers	akers Can Host Visits		Have Funded Programs	
Province-wide	Yes ☑ No □		Yes ☑	No □	Yes ☑	No □
The BCAC is a general farm organization, representing farmed We work to improve the social, economic and environmental				•		
Reg Ens, Execu	tive Director					
604.854.4454						
bcac@bcac.bc.	<u>ca</u>					
https://www.bc	<u>ac.bc.ca</u>					

ENERGY

BC HYDRO'S ENERGY AMBASSADORS								
Region	Can Provide Sp	oeakers	Can Hos	t Visits	Have Funded Programs			
Province-wide	Yes ☑	res ☑ No □ Yes □ No 区 Yes ☑ No □						
	that provide va , sustainability a	luable info nd the en	ormation o vironmen	on energy e t.	-	y, engaging and rel- nergy alternatives,		

FORESTRY

RAY TRAVERS FORESTRY							
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs		
Province-wide	Yes ☑	No \square	Yes □	No 🗵	Yes □	No 🗵	
Ray supports ecologically-based forestry, and value-based silviculture. He advocates win-win solutions with positive impacts on the productivity, quality and values of a forest.							
Ray Travers R.I	P.F (Ret.), Di	rector					
250-477-8479							
rtravers@island	<u>lnet.com</u>						
www.raytravers	sforestry.ca						

THE TOTAL PROPERTY OF								
UBC FOREST - HANEY								
Region	Can Provide Speakers		Can Ho	Can Host Visits		ed Programs		
Province-wide	Yes ☑ No □		Yes ☑	No □	Yes □	No 🗵		
in 1943, and Cro outstanding exa	own Granted to imple of sustai home to the Lo fic research pro- assing all aspe RPF, Resident ktn - 106 ubc.ca stry.ubc.ca abc.ca	o UBC in 194 nable forest oon Lake Re rojects to da ects of our fo	19. Since manager search ar ite, and e	that time, i ment, a livin nd Educatio	t has continung laboratory on Centre, the	e Gallant sawmill,		

UBC Alex Fraser Research Forest Can Host Visits Region Can Provide Speakers **Have Funded Programs** Williams Lake Yes ✓ No 🗆 Yes ☑ No □ Yes 🗆 No X Located in British Columbia's interior, UBC's Alex Fraser Research Forest is a living laboratory for discovery about forests. The Cariboo region of the province, with its strong forestry heritage, is an ideal setting to focus investigations about integrated resource management. Cattle ranching, recreation and wildlife habitat management occur alongside forest practices in this area. Improved knowledge about how best to manage these resources is gained through research. This has been our focus since 1987, when two areas of Crown land representing a variety of local ecosystems were set aside for education, demonstration, and

Cathy Koot R.P.Bio. Research Coordinator

cathy.koot@ubc.ca afrf.forestry.ubc.ca

research.

MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS								
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs			
Province-wide	Yes ☑ No □		Yes ✓	No □	Yes ☑	No □		
The Ministry of Forests, Lands and Natural Resource Operations delivers integrated natural resource management services for BC. With a long-term vision of economic prosperity and environmental sustainability, it is the main agency responsible for establishing the conditions for access and use of BC's forest, land and natural resources.								
Claudia Trudea 250-356-7278 claudia.trudeau	, ,	Strategic Pol	icy					

INVASIVE SPECIES

INVASIVE SPECIES COUNCIL OF BC							
Region	Can Provide Speakers		Can Hos	Can Host Visits		ded Programs	
Province-wide	Yes ☑	No □	Yes ☑	No □	Yes ✓	No □	
The ISCBC is an action-oriented, provincial organization that coordinates and unites efforts across BC in managing and reducing the impact of invasive species. The Council offers educators educational resources, tip sheets, and direct support in planning invasive species removal, mapping species in your community, conducting hands-on action projects and teaching about invasive species.							
Sue Staniforth, Education & Outreach Coordinator 250-655-6300 education@bcinvasives.ca http://bcinvasives.ca							
Note: for a listin website: http://l	•		-			e ISCBC's	

MARINE

CANADIAN NETV	CANADIAN NETWORK FOR OCEAN EDUCATION SOCIETY (CANOE)						
Region	Can Provide Speakers	Can Host Visits	Have Funded Programs				
Coastal Regions	Yes ☑ No □	Yes ☑ No □	Yes □ No 🗵				
CaNOE is a non-profit society, registered in BC that works to advance ocean literacy in Canada. It has a core membership in BC who work in the marine environment, marine science, marine science education and work with BC teachers and youth. It is an inclusive organization that promotes best practices and networking amongst practitioners advancing understanding about BC's 17,000 kilometers of shoreline and the ocean.							
Anne Stewart, Ma 250-728-3469 astewart.bamfield http://www.ocear		nd Communication					

PACIFIC SALMON FOUNDATION								
Region	Can Provide Speakers		Can Host Visits		Have Funde	Have Funded Programs		
Coastal Regions	Yes ☑ No □		Yes ☑	No □	Yes □	No 🗵		
It is our mission to provide thoughtful leadership in the conservation, restoration, and enhancement of Pacific salmon and their ecosystems, and to bring salmon back, stream by stream through strategic partnerships and leveraged use of resources.								
salmon@psf.ca www.psf.ca								

PARKS

CANADIAN PARKS AND WILDERNESS SOCIETY - BC CHAPTER								
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs			
Province-wide	Yes ☑	No □	Yes ☑	No □	Yes 🗹	No □		
To create large, meaningful protected areas with ecological strength – places that can nurse nature through climate change and shelter biodiversity forever. We have programs for youth leadership that you can apply for today!								
Kate MacMilla	n, Community	y Engageme	nt and Ca	mpaign As	ssistant			
604 685-7445								
kate@cpawsbc.	org							
http://cpaws.org	g							
http://www.geto	<u>outsidebc.ca</u>							

VICTORIA PARKS COLLABORATIVE								
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs			
Capital Region	Yes $\overline{\lor}$ No \square Yes \square No \boxtimes Yes \square No \boxtimes				No 🗵			
We create projects that will increase the sustainability and health of 42 Provincial Parks (including ecological reserves) that cover Southern Vancouver Island from Port Renfrew to the Gulf Islands. This include parks such as Goldstream Park, Juan de Fuca Park, and Burgoyne Bay Park. Our projects focus on collaboration, community engagement, youth stewardship and more. We have access to a pool of park mentor expertise.								
Colin Campbell								
colinkcampbellewww.elderscou								

THE ELDERS COUNCIL FOR PARKS									
Region	Can Provide	Speakers	Can Hos	st Visits	Have Funde	ed Programs			
Southern Vancouver Island	Yes 🗹	No 🗆	Yes □	No 🗵	Yes 🗆	No 🗵			
The Elders Council for Parks in BC is an independent society of retired parks system employees and conservation advocates who have dedicated a significant portion of their lives to parks and protected areas in BC. Elders Council members also participate in action-based project work aimed at ensuring the long-term well-being of BC's world-class parks system.									
Bob Peart 250-655-0250 bobpeart@shaw.ca http://www.elderscouncilforparks.org									
Ric Careless stockfordric@gmail.com									

Friends of John Dean Park								
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs			
Capital Region	Yes ☑	No □	Yes ☑	No □	Yes □	No 🗵		
The Friends of John Dean Park protect the integrity and undisturbed natural environment of the park property, consistent with compatible public recreation and educational activities; speak on behalf of the park and its heritage; ensure that it retains in perpetuity its status as a Class A provincial park; foster public awareness in the park, and acquaint members and visitors with its resources – its flora, fauna, geology and history.								
Maureen Dale: President 250-656-2484 maureendale@shaw.ca								

WETLANDS

BCWF WETLANDS PROGRAM									
Region	Can Provide Speakers		Can Ho	Can Host Visits		ed Programs			
Province-wide	Yes ☑	No □	Yes 🗹	No 🗆	Yes ✓	No □			
BCWF prides its capacity of individual of the second of th	viduals to stewar vf.bc.ca f.bc.ca	d wetlanc	ls in their	-	•	increase the			

BC AND WORLD RIVERS DAY								
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs			
Province-wide	Yes ☑ No □ Yes ☑ No ☑ No ☑					No 🗵		
World Rivers Day is a celebration of the world's waterways. It highlights the many values of our rivers, strives to increase public awareness, and encourages the improved stewardship of all rivers around the world.								
Mark Angelo, E markangelo@sk		air						

COLUMBIA BASIN TRUST									
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs				
Columbia Basin Yes ✓ No □ Yes ✓ No □ Yes ✓ No □						No 🗆			
_	Creating a legacy of social, economic and environmental well-being and to achieve greater self-sufficiency for present and future generations.								
Tim Hicks, Program Manager for Water and Environment thicks@cbt.org http://www.cbt.org									

THE STREAM KEEPERS ASSOCIATION								
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs			
Province-wide	Yes $oxdot$ No \Box Yes $oxdot$ No \Box Yes $oxdot$ No \Box					No □		
The PSkF is a non-profit society committed to supporting community groups involved in Streamkeepers activities throughout BC and the Yukon. They conduct surveys and initiate projects to maintain clean, natural streams.								
pskf@direct.ca http://www.pskf.ca/index.html								

DUCKS UNLIMITED									
Region	Can Provide Speakers		Can Hos	Can Host Visits		ed Programs			
Province-wide	Yes ☑	No \square	Yes ✓	No □	Yes ✓	No □			
Ducks Unlimited offers several programs, including Wetland Heroes, which encourages & recognizes young people to undertake their own wetland education and conservation actions; Wetland Centres of Excellence, a national program that provides some funding and support directly to schools that undertake the long-term stewardship of local wetlands and who mentor younger students; and BC Wetland Centres of Excellence in Vernon and Victoria.									
Merebeth Switz	zer , National M	anager, Ed	ucation						
(905) 361-6611									
education.ducks.ca									
education.canar	<u>:ds.ca</u>								

WILDLIFE/NATURE

BC WILDLIFE FEDERATION									
Region	Can Provide Speakers		Can Hos	t Visits	Have Funded Programs				
Province-wide	Yes \square No \square Yes \square No \square Yes \square No \square								
The BC Wildlife Federation is a province-wide voluntary conservation organization representing all British Columbians whose aims are to protect, enhance and promote the wise use of the environment for the benefit of present and future generations.									
Dave Parenteau, Regional President: Vancouver Island									
david parenteau@telus.net									
http://www.bcw	<u>rf.bc.ca</u>								

OKANAGAN COLLABORATIVE CONSERVATION PROGRAM									
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs				
Okanagan	an Yes $\overline{\lor}$ No \square Yes $\overline{\lor}$ No \square Yes $\overline{\lor}$ No \square								
and governmen Species at Risk,	ts with shared maintaining e CCP's manda entral Okanad l.com	d goals such a ecological co te is to coord gan.	as mainta nnectivit	ining regio y, and bala	onal biodivers: incing regiona				

WILD EDUCATION CANADIAN WILDLIFE FEDERATION - WILD BC								
Region	Can Provide Speakers		Can Hos	t Visits	Have Funded Programs			
Province-wide	Yes $lacksquare$ No \Box Yes $lacksquare$ No \Box Yes $lacksquare$ No \Box							
The Canadian Wildlife Federation's mission is to conserve and inspire the conservation of Canada's wildlife and habitats for the use and enjoyment of all.								
James Bartram, Director of Education jamesb@cwf-fcf.org http://cwf-fcf.org/en/explore-our-work/education/								

HABITAT CONSERVATION TRUST FOUNDATION								
Region	Can Provide	e Speakers	Can Hos	st Visits	Have Funde	ed Programs		
Province-wide	Yes ☑	No □	Yes ☑	No □	Yes ✓	No □		
The Habitat Conservation Trust Foundation offers many education programs including WildBC, GO Grants and C2C: Connecting to Conservation.								
Kerrie Mortin								
250-940-9787								
kerrie.mortin@hctf.ca								
www.hctfeducat	tion.ca							

THE NATURE TRUST OF BC									
Region	Can Provide Spe	eakers	Can Hos	t Visits	Have Funde	d Programs			
Vancouver	Yes 🗹	No □	Yes □	No ⊠	Yes □	No 🗵			
organization. The wildlife and plant 604-924-9771 info@naturetrus.http://www.natu	nts, and their critications	gically si cal habit	ignificant i ats. Our p	land in ord artner org	ler to protect i	natural diversity of			

THE BATEMAN FOUNDATION							
Region	Can Provide Spe	eakers	Can Host	Visits	Have Funded Pro	grams	
Capital Region	Yes ☑	No □	Yes □	No 🗵	Yes 🗹	No 🗆	

The Bateman Foundation explores our relationship with nature through strategic partnerships, research, collaboration and public education. The Bateman Centre is working hard to launch a school program and teachers' guide for 2015. Using our extraordinary collection of artwork by Robert Bateman, learners will deepen their understanding and appreciation of our natural world, while developing their visual literacy skills. The centre can also host visits.

Paul Gilbert

250-588-9981

paul.gilbert@batemanfoundation.org

http://batemancentre.org

SIERRA CLUB							
Region	Can Provide Speakers	Can Host Visits	Have Funded Programs				
Lower Mainland Vancouver Island Okanagan Quadra Island	Yes ☑ No □	Yes □ No ⊠	Yes ☑ No □				
Protect, conserve and educate the public about BC's wilderness, species and ecosystems within the urgent context of climate change. The Sierra Club offers K-8 curriculum programs, youth education and leadership programs, curriculum materials, and more.							

250-386-5255

info@sierraclub.bc.ca

http://www.sierraclub.bc.ca

NATURE CONSERVANCY OF CANADA, BC REGION Region Can Provide Speakers Can Host Visits Have Funded Programs Province-wide Yes ✓ No 🗆 Yes ☑ No \square Yes 🗸 No □ The NCC's mission is to lead, innovate and use creativity in the conservation of Canada's natural heritage, to protect areas of natural diversity, and to manage important natural areas. The Nature Conservancy offers a Conservation Volunteer program, which can bring students to NCC properties to conduct on-the-ground stewardship, as well as summer internships. Katy Fulton, Stewardship & Volunteer Coordinator- West Coast (250) 479 - 3191Katy.Fulton@natureconservancy.ca Allison Archibald, Philanthropy Coordinator (250) 479 - 3191allison.archibald@natureconservancy.ca Linda Hannah, Regional Vice-President, British Columbia 250-413-8011 Linda.hannah@natureconservancy.ca http://www.natureconservancy.ca/en/

CHILD AND NATURE ALLIANCE OF CANADA								
Region	Can Provide Speakers	Can Host Visits	Have Funded Programs					
Province-wide	Yes ☑ No □	Yes ☑ No □	Yes ☑ No □					
working to conr research, and th	nect children to nature the ne built environment. The ture and the outdoors in t re.ca	rough education, adv eir work aims to conn	nizations and individuals who are rocacy, programming, policy, lect Canada's children and ey live, play, learn and work.					

SOCIETY FOR ECOLOGICAL RESTORATION								
Region	Can Provide Speakers Can Host Visits Have Funded Programs							
Ominecas, Northern BC Yes \square No \square Yes \square No \square Yes \square No \square								
SERNbc is a gro vulnerable and	-	-			_	_		
202-299-9518 restorewc@gmail.com								
http://chapter.s	er.org/weste	<u>erncanada</u>						

BC NATURE								
Region	Can Provide Spe	eakers	Can Host Visits		Have Funded Programs			
Province-wide	Yes ☑	No \square	Yes 🗹	No 🗆	Yes ☑	No □		
	s and judges for s			- •	or resources, such the Education Co	_		
Anne Stewart, Marine Science Education and Communication 250-728-3469								
astewart.bamfield@gmail.com								
http://www.bcn	<u>ature.ca</u>							

GRASSLANDS CONSERVATION COUNCIL								
Region	Can Provide Speakers Can Host Visits Have Funded Programs							
Province-wide	Yes ☑	No □	Yes ☑	No □	Yes □	No ⊠		
stewardship and	BC Grasslands (Grasslands Conservation Council of British Columbia) is dedicated to the stewardship and conservation of the rare and beautiful grasslands of our province.							
Scott Benton								
scott.benton@bcgrasslands.org								
http://bcgrassla	http://bcgrasslands.org							

YOUNG NATURALISTS OF BC								
Region	Can Provide Speakers	Can Host Visits	Have Funded Programs					
Province-wide	Yes ☑ No □	Yes □ No 🗵	Yes ☑ No □					
love of nature. T Clubs for Childr Science and Ste opportunities w	The Young Naturalists Club of British Columbia (YNC) encourages young people to develop a love of nature. The YNC offers Nature Clubs in communities and schools across BC; Nature Clubs for Children and Families; NatureWILD Magazine; Action Awards Quest; local Citizen Science and Stewardship Projects. Stewards of the Future participants would have leadership opportunities with clubs, writing for the magazine or working with children on stewardship projects as nature mentors.							
604-737-8041 kristinewebber(http://www.ync								

ALLAN BROOKS NATURE CENTRE SOCIETY								
Region	Can Provide	Can Provide Speakers Can Host Visits Have Funded Prog						
Vernon	Yes ☑	No □	Yes ☑	No □	Yes ☑	No □		
Located in the grasslands of Vernon, British Columbia, ABNC offers field trips that provide hands-on experiential learning and connection to nature. ABNC will support teachers through connection to local resources and partnering organizations. ABNC serves to connect teachers to educational resources, field trip information, and stewardship and volunteer opportunities.								
250 260 4227								
www.abnc.ca								
education@ak	nc.ca							
www.facebool	k.com/AllanBro	oksNatureC	entre					

YOUTH LEADERSHIP

CHECK YOUR HEAD: THE YOUTH GLOBAL EDUCATION NETWORK							
Region	Can Provide	e Speakers	Can Ho	st Visits	Have Funde	ed Programs	
Lower mainland	Vog V No Vog V No Vog V No V						
Creating spaces	-	- -	ne togeth	er to conne	ect, imagine a	nd build socially	
Kaitlin Pelletier 604-685-6631							
kaitlin@checkyourhead.org http://checkyourhead.org/							

YESBC (YOUTH FOR ENVIRONMENTAL STEWARDSHIP)								
Region	Can Provide S	peakers	Can Host Visits		Have Funded Programs			
Vancouver Island	Yes ☑	No □	Yes ☑	No 🗆	Yes ☑	No □		
Since 2008, YesBC has provided educational and leadership opportunities through training programs, engagement in youth driven initiatives, workshops, presentations and large scale events. Their signature annual event is the YesBC Youth Climate Action Summit and Off the Grid Music Festival.								
Judy Fainstein, Executive Director and Founder 250-744-7615 judy@yesbc.ca www.yesbc.ca http://offthegridfestival.ca								

DUKE OF EDINBURGH'S AWARD						
Region	Can Provide Speakers		Can Host Visits		Have Funded Programs	
Province-wide	Yes ☑	No □	Yes ☑	No □	Yes ☑	No \square
The Duke of Edinburgh's Award is a non-competitive youth leadership program available to young people across BC ages 14-24, regardless of background, circumstances, or abilities. Key to the success of the program is the setting and achieving of goals by youth benefitting themselves and their communities through volunteer service, new skills development, physical activity, and exploring the natural environment. There are three Award levels: Bronze, Silver, and Gold. Youth can also earn high school credits for every level of the Award they achieve.						
Sushil Saini, Executive Director						

250-385-4232 or 1-888-881-7788 ssaini@dukeofed.org http://www.dukeofed.org/bc