



**STEWARDS OF  
THE FUTURE**

# Stewards of the Future

# Toolkit

2019

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



An initiative supported by  
**the Honourable Janet Austin,**  
Lieutenant Governor of British Columbia

## Acknowledgements

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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.

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# Forward

## Prepared for our Future



As the 30th Lieutenant Governor of British Columbia, it is my great pleasure to continue support for Stewards of the Future, the priority project of the Honourable Judith Guichon, 29th Lieutenant Governor of British Columbia.

Stewards of the Future encourages young people to connect with the land and understand the precious resources right under their feet. In creating Stewards of the Future, Her Honour recognized that the next generation of youth will be our future leaders, coming from all backgrounds and every corner of British Columbia, and that appreciation of the natural environment and lands on which our civilizations rest will be vital to their future.

The Honourable Judith Guichon created this program inspired by the inquiring and creative minds of the youth of British Columbia and her love of the beautiful natural spaces of our province. I am most pleased to continue this important initiative and continue to encourage students to consider how we can come together to establish a vision for a sustainable future.

Sincerely,

The Honourable Janet Austin, OBC  
Lieutenant Governor of British Columbia



**The Coat of Arms of the Honourable Judith Guichon, 29th Lieutenant Governor of British Columbia, whose passion for environmental stewardship is reflected here:**

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 ranches 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.

## Welcome to the Stewards of the Future Toolkit!

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.

Stewards of the Future provides funding 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, 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 homeland and restores the essential links between a person and her place.”

– Laurie Lane-Zucker, Orion Society

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

– Simon Lucas, Nuuchah Nulth elder



**STEWARDS OF  
THE FUTURE**

# 1. Program Overview

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## Introduction:

### What is Stewards of the Future?

Stewards of the Future (SoF) is an exciting youth initiative initially developed by 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 Office of the Lieutenant Governor for direct support as discussed later in the Toolkit.

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 the “three R’s” of the Honourable Judith Guichon – 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.

## 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

**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:

- 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

# 2. How Stewards of the Future Works

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## 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 6 – 12, but is flexible in terms of subjects and age levels to accommodate a diversity of participation.

Applications for funding for Spring 2019 are due by Friday, November 30, 2018. 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 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.
- **Recognition:** Students completing the program have the opportunity to attend the end of year conference and receive a certificate from the Lieutenant Governor.



## Stewards of the Future Process:

### Step 1.

#### Application Process

The teacher /group leader will apply to the program online, via the Government House website (<http://ltgov.bc.ca/>). Application forms and criteria are located on the Government House website and in the *Toolkit Appendices*.

Applications will be accepted until  
**Friday, November 30, 2018**

### Step 2.

#### Application Review

All applications received by the due date will be reviewed and assessed. Successful applicants will be notified by Wednesday, December 12, 2018.

### Step 3.

#### Spring 2019:

#### Planning & Funding SoF Community Learning Opportunities

The educator will present the program to the students in early 2019 and work through some activities using the Toolkit or other resources to highlight community features and identify themes that students may want to explore.

### Step 4.

#### Community-based Learning Activities and Field Trips

Teachers/leaders and students carry out their community learning project, using the funding to support implementation. 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.

### Step 5.

#### 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. Participants are encouraged to share their project with the school, other community groups and/or the media.



# 3. The Stewards of the Future Toolkit

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## 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 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.

## 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 well-being. 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. Place-based 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 re-connection 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 problem-solving 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)



# 4. Stewards of the Future: Activities

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## 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 or another class.

### **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)*



## 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:*

1. 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 or the community.

## 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.

##### *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)

##### *Materials:*

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

##### *Procedure:*

1. 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) .

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 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/>

### **HCTF Education / WildBC**

<http://hctfeducation.ca>

WildBC 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. 22

### *Procedure:*

1. Identifying interview candidates:  
Once a list of interviewees is developed 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 and 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 or another class.

### *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:*

1. 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?

## 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:*

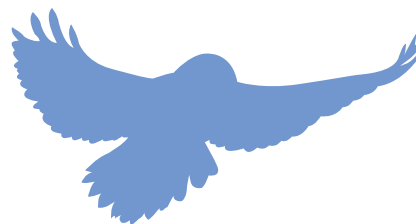
There are many perspectives, needs and differing priorities involved in decisions about land use, stewardship and community development. Stewardship is an ongoing and complicated process, involving input from all those involved. By exploring the different ecological, economic, cultural, spiritual and 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!

### *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)

# Appendices

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## 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. Resources and References

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



# A. Program Forms

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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



# 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,  
November 30, 2018.**

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 use the funding for;

### **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 and minimum 3 minute video by April 12, 2019.  
*Please note: The video footage is to capture the student participation and does not have to be professionally edited.*

### **Apply Now!**

- Download and save an application form;
- Open form with Adobe and complete application electronically;
- Save and email to ghrsvp@gov.bc.ca;
- Applicants will be notified by December 12, 2018.

### **Disbursements**

Funds are provided by the Government House Foundation. Updates on progress throughout the program are encouraged. Participants are required to complete a Project Summary Report and submit it no later than Friday, April 12, 2019.

## 2. Stewards of the Future: Application Form

Date: (dd/mm/yyyy) .....

### 1. Applicant Information:

Main Contact Name .....

Email ..... Phone 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 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)

.....  
.....

## 6. Field Studies Plan:

Briefly describe what you / students plan to do: (max.100 words)

.....

.....

## 7. Budget:

Please check off what the funds will be spent on and provide approximate costs

- ☐ Transportation (Requests can cover bussing, mileage at .50/km, charter, water taxi and ferry.)  
(approximate cost) .....
- ☐ Field Trip Leader and/or Program Fee per class: .....
- ☐ Teacher Release time: .....
- ☐ Project Equipment: (Requests are for outdoor field study equipment or project materials only.  
Food, accommodation and clothing are not eligible.) (please describe)

.....

.....

- ☐ Other Resources (please describe)

.....

Other information about your project you would like to share

.....

## Budget Summary:

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

**Thank You! Please email this completed form to:**

**Email:** ghrsvp@gov.bc.ca

**For information or support, please call:** 778-974-5538

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

Student's Name .....

I, (parent or guardian: print name) .....  
effective as of the date I sign below, hereby acknowledge and agree with the following:

The Government House Foundation and the Stewards of the Future initiative may use photographs, audio and/or video recordings, sketches, notes or other materials that capture my child's image, voice, likeness, comments or other personal information (collectively, "Recordings"), whether created by or on behalf of Government House Foundation, or provided by me and/or others on my behalf.

These Recordings may be used by Government House Foundation for educational, editorial, public relations and/or public promotion, including reproducing, modifying, making derivative works from, publishing, distributing and broadcasting them, in whole or in part, in any manner that it wishes, including by way of the Internet.

BY SIGNING BELOW I CONFIRM THAT I HAVE READ, UNDERSTOOD AND AGREE TO THE TERMS AND CONDITIONS OF THIS CONSENT AND RELEASE.

If the subject or creator of the Recordings is a person under the age of 19, I represent and warrant that I am at least 19 years of age and I have the authority to, and I do hereby, agree in conjunction with or for and on behalf of the Minor, as well as myself, to all of the terms and conditions contained in this Consent and Release.

SIGNED AND DELIVERED THIS ..... DAY OF ..... , 20.....:

.....  
Signature

.....  
Signature of Minor (if at least age 13)

## 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 Office of the Lieutenant Governor by

**Friday, April 12, 2019.**

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 .....

.....

.....

Project Objectives .....

.....

.....

Main Issue(s) Explored .....

.....

.....

Guest Speaker(s) .....

.....

Topic of their presentation .....

.....

.....

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)

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**Teacher Reflection:**

Describe what worked, what you would do differently, any observations about student learning or anything else to share. (1-2 paragraphs)

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**\*\* Attach at least one photo and minimum 3-minute video of students participating in the project. The video can either be a YouTube Link or mp4 attachment.**

**Please submit this form electronically as an attachment and email to:**

**Email:** [ghrsvp@gov.bc.ca](mailto:ghrsvp@gov.bc.ca)

**For information or support, please call:** 778-974-5538

# B. Teacher /Leader Tips

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



# 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

## 2. Outdoor Field Trip Planner Sheet

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.

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 .....

### 3. A Note on Conservation When Teaching Outdoors

Nearest Hospital .....

School phone number .....

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.

### 4. Field Trip Checklist

#### **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.

Things to Do Before, During and After a Trip



## Pre-field trip

- ☐ Send **student waivers** to parents and get 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 devices.
- ☐ **Transportation:** parent drivers (organize car-pooling and maps)
- ☐ Organize bus and any money needed from students
- ☐ Walking: outline route
- ☐ **Parent / Volunteer helpers:** send them all an outline of their expectations /tasks
- ☐ **Document emergency procedures and phone numbers**
- ☐ **First aid kits and any student medication:** who will carry them .....
- ☐ **Sick kid plan:** Who will handle this if it arises on the trip: .....

## Planning

- ☐ Make name tags for all students and volunteer helpers / other teachers
- ☐ Organize a buddy system.
- ☐ Make student group configurations for small group work.
- ☐ Volunteer helpers: check that they know their roles and responsibilities.
- ☐ Do a site visit to avoid any surprises and get familiar with the site.
- ☐ Do some pre-trip activities that lead in and

prepare students (sensory awareness)

- ☐ Share the day's agenda and site layout with your class.
- ☐ Get a map that includes site layout plus parking, washrooms, picnic sites etc..
- ☐ Scheduling at the site: bus return time .....snack breaks ..... lunch .....
- ☐ Activity priorities: what you'll omit if constrained by time
- ☐ Prepare payments if needed (program/ parking).

## The Day of the field trip

- ☐ Share itinerary and map with drivers and leaders: include contact numbers in case anyone gets lost or delayed.
- ☐ Class list - check students off as class arrives and departs site.
- ☐ Contingency plans for inclement weather: Review the "what if" procedures if anyone gets separated.
- ☐ Take lots of pictures!

## After the field trip

- ☐ Follow-up and Celebration: Summarize learning experiences with a class mural, displays, photos, posters, stories, poems, maps, etc..
- ☐ Reflection: Did you achieve your outcomes as planned? If not, is that necessarily a bad thing? Positive elements / challenges of the trip. Things to do differently next time.

# C. Educator Resources and References

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## 1. Stewards of the Future: Resources

The following list includes groups whose focus aligns with the Stewards of the Future 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.



### BC ASSOCIATION OF FARMER'S MARKETS

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.

<http://www.bcfarmersmarket.org>

### BC AGRICULTURE IN THE CLASSROOM FOUNDATION

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.

<http://www.aitc.ca/bc/>

### DELTA FARMLAND AND WILDLIFE TRUST

Our 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.

<http://www.deltafarmland.ca>

### BC 4-H COUNCIL

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.

<http://www.bc4h.bc.ca>

### BC ASSOCIATION OF AGRICULTURAL FAIRS & EXHIBITIONS

BC Fairs provides leadership, resources and services to agricultural fairs, exhibitions and related events so they can effectively celebrate the diversity and importance of local agriculture in communities throughout BC.

**[www.bcfairs.ca](http://www.bcfairs.ca)**

### **BC CATTLEMEN'S ASSOCIATION**

Maintaining a healthy cattle industry that provides quality beef products to consumers and is guided by strong volunteer membership, environmental stewardship, respect for stakeholders and excellent business practices.

**<http://www.cattlemen.bc.ca>**

### **AGRICULTURE COUNCIL**

The BC Agriculture Council (BCAC) represents over 14,000 BC farmers and ranchers and close to thirty farm sector associations from all regions of the province. Its mission is to continually improve the social, economic and environmental sustainability of BC Agriculture.

**<https://www.bcac.bc.ca>**

## **Energy**

### **BC HYDRO'S ENERGY AMBASSADORS**

Energy Ambassadors help friends, teachers and schools use energy and resources wisely and build a culture of sustainability. Schools from across B.C. can participate.

**[https://www10.bchydro.com/resources/energy\\_ambassadors](https://www10.bchydro.com/resources/energy_ambassadors)**

## **Forestry**

### **RAY TRAVERS FORESTRY**

Ray supports ecologically based forestry, and value-based silviculture. He advocates win-win solutions wherever possible with positive impacts on the productivity, quality and values of a forest, in both the short and the long term. Ray can provide presentations on sustainable forestry practices.

**<http://www.raytraversforestry.ca>**

### **MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS**

The Ministry of Forests, Lands and Natural Resource Operations delivers integrated natural resource management services for British Columbians. 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.

**<https://www2.gov.bc.ca/gov/content/governments/organizational-structure/ministries-organizations/ministries/forests-lands-natural-resource-operations-and-rural-development>**

## Invasive Species

### INVASIVE SPECIES COUNCIL OF BC

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.

**<http://bcinvasives.ca>**

Note: for a listing of all the regional invasive Species Committees, see the ISCBC's website:  
**<http://bcinvasives.ca/about/partners/bc-stakeholders/regional-committee-map>**

## Marine

### BAMFIELD MARINE SCIENCE CENTRE

The Bamfield Marine Sciences Centre provides University Programs, Research, and Public Education clients with a state-of-the-art research facility and first-class learning environment, balancing the convenience of a modern laboratory with the advantages of a field station.

**<http://www.bamfieldmsc.com/>**

## Other

### DUKE OF EDINBURGH'S AWARD

The Award is a non-competitive programme in which participants set and achieve personal goals for community service, skills, fitness, and adventure.

**<http://www.dukeofed.org>**

## Parks

### BC PARKS

BC Parks is responsible for the designation, management and conservation of a system of ecological reserves, provincial parks, conservancies, protected areas and recreation areas located throughout the province. British Columbia's parks and protected areas system contains nationally and internationally significant natural and cultural features and outdoor experiences. The provincial system of parks is dedicated to the protection of natural environments for the inspiration, use and enjoyment of the public.

**<http://www.env.gov.bc.ca/bcparks/aboutBCParks/>**

### CANADIAN PARKS AND WILDERNESS SOCIETY - BC CHAPTER



CPAWS protects wilderness in every corner of B.C. and deep into the ocean. They create and safeguard large parks, protected areas and wilderness corridors – places like the Tatshenshini, Muskwa Kechika, Northern Rockies, Pacific Rim, Gwaii Haanas and Bowie Seamount.

<http://www.cpawsbc.org>

<http://www.getoutsidebc.ca>

### THE ELDERS COUNCIL FOR PARKS

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.

<http://www.elderscouncilforparks.org>

## Wetlands

### BC AND WORLD RIVERS DAY

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.

<http://worldriversday.com/>

### COLUMBIA BASIN TRUST

The Columbia Basin Trust acts for the social, economic and environmental well-being of the Basin—now and for generations to come.

<http://ourtrust.org/>

### DUCKS UNLIMITED

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.

<http://www.ducks.ca/resources/educators/>

### THE STREAMKEEPERS ASSOCIATION

The Pacific Streamkeepers Association 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.

<http://www.pskf.ca/index.html>

## **Wildlife / Nature**

### **BC WILDLIFE FEDERATION**

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.

<http://www.bcwf.bc.ca>

### **WILD EDUCATION CANADIAN WILDLIFE FEDERATION - WILD BC**

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.

<http://www.cwf-fcf.org/>

### **THE BATEMAN FOUNDATION**

The Bateman Foundation explores the relationship with nature through strategic partnerships, research, collaboration and public education. The Foundation assumes a custodianship of the collections and archives of Robert Bateman and other artists of nature and uses every means possible to make the artworks and stories available to the public for education and inspiration.

<http://batemancentre.org>

### **THE NATURE TRUST OF BC**

The Nature Trust of British Columbia is a non-profit, non-advocacy, land conservation organization. They acquire ecologically significant land in order to protect natural diversity of wildlife and plants, and their critical habitats.

[info@naturetrust.bc.ca](mailto:info@naturetrust.bc.ca)

<http://www.naturetrust.bc.ca>

<http://www.naturetrust.bc.ca/about-us/partners/programs/>

### **HABITAT CONSERVATION TRUST FOUNDATION**

The Habitat Conservation Trust Foundation offers many education programs including WildBC, GO Grants and C2C: Connecting to Conservation.

<http://www.hctf.ca>

### **NATURE CONSERVANCY OF CANADA, BC REGION**

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.

<http://www.natureconservancy.ca/en/>

### **SIERRA CLUB**

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.

<http://www.sierraclub.bc.ca>

### **CHILD AND NATURE ALLIANCE OF CANADA**

The Child and Nature Alliance of Canada is a network of organizations and individuals who are working to connect children to nature through education, advocacy, programming, policy, research, and the built environment. Their work aims to connect Canada's children and families with nature and the outdoors in the settings where they live, play, learn and work.

<http://www.childnature.ca>

### **GRASSLANDS CONSERVATION COUNCIL**

BC Grasslands (Grasslands Conservation Council of British Columbia) is dedicated to the stewardship and conservation of the rare and beautiful grasslands of our province.

<http://bcgrasslands.org>

### **BC NATURE**

BC Nature has 53 clubs, many of whom offer school programs or resources, such as speakers, field trip leaders and judges for science fairs.

<http://www.bcnature.ca>

### **SOCIETY FOR ECOLOGICAL RESTORATION**

SERNbc is a group of individuals and agencies interested in collaborating to help restore vulnerable and degraded ecosystems in the Omineca Region of Northern British Columbia.

**<http://chapter.ser.org/westerncanada>**

### **HEALTHY BY NATURE**

Encouraging Canadians to spend more time in parks will support improved physical and mental/emotional health, and provide opportunities to inform and educate people about the important connection between healthy ecosystems and healthy human populations.

**<http://healthybynature.ca>**

### **ALLAN BROOKS NATURE CENTRE SOCIETY**

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.

**<http://www.abnc.ca>**

## **Youth Leadership**

### **CHECK YOUR HEAD**

Creating spaces where young people come together to connect, imagine and build socially and environmentally just communities.

**<http://checkyourhead.org/>**

### **YESBC (YOUTH FOR ENVIRONMENTAL STEWARDSHIP)**

Since 2008, YesBC has provided educational and leadership opportunities through training programs, engagement in youth driven initiatives, workshops, presentations and large scale events.

**<http://www.yesbc.ca>**

## 2. 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.

### **BC Hydro's Energy Ambassadors Grades 9 – 12**

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.

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

### **Check Your Head (Vancouver, BC)**

Check Your Head (CYH) is a youth-driven not-for-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**

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.

<http://cmnbc.ca/>

### **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](http://www.eya.ca)

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

<http://eya.ca/>

### **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.

<http://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.

<http://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.

<https://www.naturewatch.ca/>

### **WildBC / Habitat Conservation Trust Foundation Education**

WildBC is one of the Habitat Conservation Trust Foundation's longest standing and successful environmental education programs. WildBC's vision is to inspire and empower people and their communities to understand and care for the natural world through environmental education.

<http://hctfeducation.ca/>

### **Wildlife Tree Monitoring**

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

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

### 3. 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>

#### **Buck Institute for Education:**

A range of resources around eco-literacy, experiential and place-based learning.

<http://www.bie.org>

#### **8 Essentials for Project-Based Learning:**

<http://www.bie.org/object/tools/communities>

#### **Canadian Youth Action Guide for Agenda 21:**

<http://lsf-lst.ca/en/projects/teacher-resources/professional-development/professional-development-workshops/youth-taking-action-teacher-workshop>

#### **Pacific Education Institute:**

Excellent resources on systems thinking, project based learning and outdoor learning.

<http://www.pacificeducationinstitute.org>

## 4. 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.
- 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 from the Green Street Youth Steering Committee.
- 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.
- 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.pacifieducationinstitute.org>
- Pomponio, Roberta (2011). Blue Ridge Middle School. Placed Based Education.
- Ponto, Coleen and Nalani Linder. (2011). Sustainable Tomorrow: A Teachers' Guidebook for Applying Systems Thinking to Environmental Education Curricula. Pacific Education Institute. <http://www.pacifieducationinstitute.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.