



Films for Change

Sustainability Education
Activity Guide

About This Guide

This educator's guide is intended to serve as an additional module in the [Films for Change: A Pedagogical Template for Sustainability Education](#) guide, though it can also be used independently. More information on the Films for Change program and playlist can be found at nfb.ca/playlist/films-change.

The activities in this guide invite students to engage in the debate surrounding the concept of sustainability by addressing the issues of monocultures (the practice of growing a single crop intensively, on a very large scale, year after year) and industrial agriculture. An inquiry and research process precedes the actual debate, with the National Film Board of Canada (NFB) films **Island Green** and **The Fruit Hunters** serving as springboards for discussion. The learning model proposed in this guide can be used to develop other debates on problems related to sustainability.

The activity guide aims to achieve the following learning objectives:

- Develop environmental literacy;
- Develop media literacy;
- Develop critical and creative thinking skills.

Activity Overview and Research

That's debatable!

Debating can be a useful teaching strategy, a means of engaging students in an authentic learning environment that leads to a deeper understanding of important issues. A debate can be launched when circumstances permit an in-depth discussion of contrasting points of view. In the structured exchange of arguments between two opposing teams, each team defends or attacks a given proposition while the procedure is formally judged, and ultimately a winner is declared. With a relevant issue at its core, a debate is a respectful and defined manner in which to argue a viewpoint.

The process of preparing and engaging in a debate is a rich learning experience, as participants must understand and master both facts and implications about a given situation. Students must therefore engage in a process of *inquiry* in order to be able to participate and contribute meaningfully to the debate.

From the perspective of an educator, winning the debate is not the sole indicator of student success. The debating process is complex and requires that students develop their abilities to research, analyze, organize, reason, justify, refute and present. As such, students can perform very well in the debate, from an academic perspective, without necessarily winning. Although engaging students in a debate can seem intimidating at first, this pedagogical approach can yield great rewards in terms of the learning opportunities and motivational power it offers.

Important note:

*For the purposes of this activity, the debate has been set around the idea of **sustainability**. The model presented applies the issues of monocultures and industrial agriculture, but these can be substituted for any other issue. The NFB offers a rich selection of resources that will introduce students to topical issues that are suitable for a debate.*

Purpose

To debate a proposition related to the concept of sustainability in order to develop an opinion on and comprehensive understanding of the opposing views on the issue.

Material and resources

NFB films to watch for this activity:

Island Green

Prince Edward Island has long been famous for its spuds and red mud. But in the last 50 years since industrialized farming took root, this small, agricultural island has been building a new reputation—for having the highest cancer and respiratory illness rates in Canada. Is there a link?

Every year, countless tourists are greeted by PEI's warm sandy beaches, quaint seaside villages and, of course, field after field of the island's signature potato crops. Rather than dwelling on PEI's worrisome monocropping practices, **Island Green** dares to ask: What if PEI went entirely organic?

Using beautiful imagery and poignant stories from the island's small but growing community of organic farmers, PEI filmmaker Millefiore Clarke, whose work includes *December in Toronto* and *Stalking Love*, explores a healthier future for Canada's smallest province. In addition to the farmers' stories, she shares the stirring words of PEI-born poet Tanya Davis, which remind us that we can rob the land only so much before it robs us of the nourishment we need for life.

As **Island Green** shows organic farmers working the fields, eating their bountiful harvests together with friends and family, and discussing the success of their farms, its story is ultimately one of hope and healthy promise.

Nature of Things: The Fruit Hunters – Parts 1 and 2

You can find them deep in the jungles of Borneo, in the hills of Umbria and perhaps even in your own backyard. They are fruit hunters, the subjects of the new film by acclaimed director Yung Chang (*Up the Yangtze, China Heavyweight*). **The Fruit Hunters** travels across culture, history and geography to show how intertwined we are with the fruits we eat. Our guides are devoted fruit fanatics. Adventurers Noris Ledesma and Richard Campbell scour the jungle for rare mangos, hoping to intervene before the plants are steamrolled by industrialization. Pioneering scientist Juan Aguilar races to breed bananas resistant to a deadly fungus that threatens the worldwide crop. And fruit detectives including Isabella Dalla Ragione investigate Renaissance-era paintings for clues, hoping to rediscover lost fruits. And, of course, there are the fruits themselves, presented in all their mouthwatering glory: cherimoyas, ice cream beans, durians and more. A cinematic odyssey through nature and commerce, **The Fruit Hunters** will change not only the way we look at what we eat but how we view our relationship to the natural world.

- The following excerpts from **The Fruit Hunters** are directly related to this activity:

Reference	Total time	Description of segment
0:00-16:31	16 min. 31 sec.	Fruit collectors and their passions Relationship between humans and fruits Permanent global summer Monoculture of Cavendish banana Mango-culture legacy of David Fairchild
24:12-26:04	1 min. 52 sec.	Story of fruits and people before monocultures
53:13-1:07:44	14 min. 31 sec.	Fruits of the forest of Borneo Biodiversity and biophilia
1:14:05-1:19:24	5 min. 19 sec.	The Kura-kura tree Deforestation in Borneo for palm tree monocultures
1:28:42-1:30:54	2 min. 12 sec.	Fruit diversity
TOTAL viewing time: 40 min. 25 sec.		

More NFB films on the subject of monocultures and industrial agriculture:

The World According to Monsanto

With operations in 46 countries, Monsanto has become the world leader in genetically modified organisms (GMOs), as well as one of the most controversial corporations in industrial history. Since its founding in 1901, the U.S. multinational has faced trial after trial due to the toxicity of its products. Today, it has reinvented itself as a “life sciences” company converted to the virtues of sustainable development.

Calling on hitherto unpublished documents and first-hand accounts by victims, scientists and politicians, **The World According to Monsanto** pieces together the story of an industrial giant that, thanks in part to lies, collusion with the American government, pressure tactics and attempted corruption, has become one of the world’s leading seed manufacturers, spreading GM crops worldwide with no real monitoring of their effects on nature or human health.

Something in the Air

Prince Edward Island—a rural paradise and a safe haven from the city. But is this image really a mirage?

Many of the children on the Island can’t catch their breath. PEI has the highest rate of hospital admissions for asthma in Canada, and many affected never leave home without an inhaler. Hanging over the farmers’ fields, reaching into every city and town, is an invisible cloud of extremely dangerous poisons.

Since the late 1960s, the potato has become the commercial crop, creating a monoculture that has destroyed the soil’s natural balance. Consequently, potato farmers have become more and more dependent on pesticides. The last 20 years have seen a 700% increase in the use of these toxins to kill insects that might endanger the potato harvest and the Island’s economy. Filmmaker Sylvie Dauphinais discovered that living in paradise comes at a heavy cost: the health of her son. She has made this documentary to issue a wake-up call about an environmental crisis that is putting the ill, the elderly and the young at greatest risk. (Some subtitles.)

Research links

Biodiversity and Food

International Development Research Centre (IDRC):
idrc.ca/EN/Resources/Publications/Pages/ArticleDetails.aspx?PublicationID=565

Harvard School of Public Health:
chge.med.harvard.edu/topic/biodiversity-and-food-production

USC CANADA:
usc-canada.org/biodiversity

Modern and Industrial Agriculture

Agriculture and Agri-Food Canada:
agr.gc.ca/eng/about-us/publications/economic-publications/alphabetical-listing/an-overview-of-the-canadian-agriculture-and-agri-food-system-2013/?id=1331319696826

CropLife America:
croplifeamerica.org/about

croplifeamerica.org/sites/default/files/node_documents/Intro%20to%20Modern%20Ag.pdf

Monsanto:
monsanto.com/improvingagriculture/Pages/why-does-agriculture-need-to-be-improved.aspx

Beyond Factory Farming:
beyondfactoryfarming.org/fr/node/296

Monocultures

Union of Concerned Scientists:
ucsusa.org/food_and_agriculture/our-failing-food-system/industrial-agriculture

Carbon Trade Watch:
carbontradewatch.org/issues/monoculture.html

Cavendish Bananas

Global Post:
globalpost.com/dispatch/news/culture-lifestyle/food-drink/121120/bananas-racer-four-fungus-honduras

NPR:
npr.org/2011/07/22/138610585/yes-we-do-have-bananas-for-now

The Scientist:
the-scientist.com/?articles.view/articleNo/30953/title/The- The Scientist: Beginning-of-the-End-for-Bananas

Food Republic:
foodrepublic.com/2011/07/26/banana-problem

New York Times:
nytimes.com/2008/06/18/opinion/18koeppel.html?_r=0

MSN News:
news.msn.com/science-technology/is-it-time-to-say-bye-bye-to-the-banana

Potatoes

PBS:
pbs.org/thebotanyofdesire/potato-control.php

pbs.org/wgbh/pages/frontline/shows/hackers/blame/threat.html

Agriculture and Agri-Food Canada:
marquecanadabrand.agr.gc.ca/fact-fiche/4691-eng.htm

PEI Potatoes:
peipotato.org

Spud Smart:
spudsmart.com/video.html

National Farmers Union:
nfu.ca/story/pei%E2%80%99s-best-family-farm-story-tells-human-side-canadian-agriculture-and-trade-policy-failings

Debating as a Teaching Strategy

Link to instructional strategies online:

olc.spsd.sk.ca/DE/PD/instr/strats/debates/index.html

Activity

Introduction

- Following the process outlined in Parts 1 and 2 of the activity entitled “Focus on the film” in the NFB’s Films for Change guide (see page 12 of onf.ca/sg/100559.pdf), view the above excerpts from *The Fruit Hunters* and the full version of *Island Green*.
- Use a reflective discussion about these two films to propose the idea of a debate on the issue of monocultures and industrial agriculture. Suggest a class debate with the following resolution: **“Be it resolved that, in 10 years, the provincial government of Prince Edward Island will ban all monocultures in the province.”**

Part 1 – Introduce students to the concept of debating

- In order for students to become familiar with debating procedures, complete “How a Debate Operates,” Unit 1 of the Saskatchewan Elocution and Debate Association (SEDA) *Step-by-Step Guide* (see page 5 of saskdebate.com/media/2666/2004revisedstep-by-stepfinal.pdf). This unit will familiarize students with the steps of a **discussion-style debate**, which can be applied to this activity.
- With students, determine and discuss success criteria for the complex process of debating. This important step will guide their performance and learning throughout this activity. Refer to the two rubrics in the “Assessment Options” section at the end of this guide as well as the document *Judging SEDA Debates* (saskdebate.com/media/15884/2011%20Judging%20SEDA%20Debate.pdf).

Part 2 – Setting up the teams and roles for the debate

- In order to ensure that all students are engaged in meaningful learning, form several teams that will participate in separate debates. The actual debates can take place simultaneously or sequentially, depending on your preference. If they are held simultaneously, you will need to enlist the help of parent volunteers or other teachers to act as chairpersons. If the debates are planned sequentially, you can play the role of chairperson in every debate. The following table (whose numbers are based on a class of 32 students) demonstrates how to assign roles for the debate:

Role for the debate	Suggested # of students per team	Suggested # of teams per class	Total # of students in this role
Affirmative team	3	4	12
Negative team	3	4	12
Judges <i>Note: Student judges are joined by a volunteer adult during the debate to bring the team to an odd number.</i>	2	4	8

- All teams, even the judges, must take part in research to develop an in-depth understanding of the issue being debated, from both affirmative and negative perspectives. Students should devote their efforts to learning **“something of everything and everything of something,”** as there is nothing worse than a debating team that cannot answer or ask questions! Students should be familiar with the topic and able to discuss it *without* referring to their research notes. Supporting evidence for specific points can be recorded on cards. Please refer to Part 1 of “Research,” Unit 3 of SEDA’s *Step-by-Step Guide* (see page 17 of saskdebate.com/media/2666/2004revisedstep-by-stepfinal.pdf) for tips on guiding your students in their research.

- The following checklist of questions can also help students in their research:
 - * What do I already know about this issue?
 - * What do I need to learn about this issue?
 - * Who can I talk to about this issue?
 - * What are some reliable sources of information about this issue?
 - * Who are the authors of this information, and why is it being shared from their perspective?
 - * What is the most important information that needs to be gathered? Consider these questions:
 - What is the nature and urgency of the need for change?
 - What problems/facts support or justify this need for change?
 - What can the plan for change be?
 - What are the advantages of this plan?
 - What advantages/facts support or justify the current situation (benefits)?
 - What would make a change undesirable or unworkable?
 - How are the benefits of a change insignificant or impossible to achieve?
 - What disadvantages can be outlined regarding the plan for change?
 - * How can the research task be shared with my teammates so we can each focus on an area and then share all the information?
 - * How will our team keep track of our sources of information?
 - * How can pertinent information be selected and organized?
 - * What connections can be made between various pieces of information?
 - * What evidence should go onto cards? (For models of evidence cards, please refer to page 4 of SEDA's *Grab 'n Go Debate Unit*: saskdebate.com/media/3101/grab%20and%20go%20debate%20unit.pdf.)
- You may also refer to SEDA's *Grab 'n Go Debate Unit* to provide students with a template and worksheets that will help them compose their speeches.

The judges will need to become familiar with their role and their responsibilities in the debate. The document *Judging SEDA Debates* (saskdebate.com/media/15884/2011%20Judging%20SEDA%20Debate.pdf) is an excellent and concise guide to understanding and evaluating a debate. Judges should review this document extensively and confirm their understanding of their role with the volunteer adults who will join them during the debate.

Part 3 – Debating!

- If you wish to further explore strategies for effective debating, and further prepare the students for this challenge, SEDA's Step-by-Step Guide (saskdebate.com/media/2666/2004revisedstep-by-stepfinal.pdf) has several exercises that can be done with the class.
- Once everyone is ready for the big day, begin the debates, as described in Part 1 of this activity.

Assessment Options

- Collect anecdotes on students' participation and contributions.
- Ask students to self-evaluate their contribution to the team.
- Use an electronic student response system throughout the debate process.
- Exit card (after the debates): Ask students to answer the question: "Regardless of which side you argued during the debate, what is your personal point of view regarding the resolution? Justify your position."
- The following rubrics are designed for the teachers' and/or peer assessment:
go.hrw.com/resources/go_ss/teacher99/rubrics/RUBRIC10.pdf
edu.gov.mb.ca/k12/cur/socstud/frame_found_sr2/gblms/g-15.pdf

ICT Opportunities

- Critical thinking through online research;
- Collaboration using wikis and/or Google Docs;
- Communication using SRS;
- Creativity through visual presentation.

References

Saskatchewan Elocution and Debate Association:
saskdebate.com/media/2666/2004revisedstep-by-stepfinal.pdf

Instructional Strategies Online:
olc.spsd.sk.ca/DE/PD/instr/strats/debates/resource.html

Debateable.org:
debateable.org/debate-strategies/debate-research