

# SURVIVING PROGRESS

A FILM BY MATHIEU ROY & HAROLD CROOKS

STUDY GUIDE





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*“Like all creatures, humans have made their way in the world so far by trial and error; unlike other creatures, we have a presence so colossal that error is a luxury we can no longer afford. The world has grown too small to forgive us any big mistakes.”*

— Ronald Wright

## ABOUT THE FILM

***Surviving Progress***  
(Directed by Mathieu Roy and Harold Crooks, 2011, 83 min 36 s)

***Surviving Progress*** presents the story of human advancement as awe-inspiring and double-edged. It reveals the grave risk of running the “21st century’s software”—our know-how—on the ancient hardware of our primate brain; hardware that has not been upgraded in 50,000 years. Through rich imagery and an immersive soundtrack, filmmakers Mathieu Roy and Harold Crooks launch us on a journey of contemplation about our evolution from cave dwellers to space explorers.

Ronald Wright, whose bestselling book *A Short History of Progress* inspired this film, argues that civilizations have been repeatedly destroyed by “progress traps”—alluring technologies that serve immediate needs but ransom the future. Interspersing stories from a Chinese car-driving club, a Wall Street insider who exposes an out-of-control, environmentally rapacious financial elite, and eco-cops defending a scorched Amazon, the film lays stark evidence before us. In the past, we could use up a region’s resources and move on; if today’s global civilization collapses from overconsumption, that’s it. We have no backup planet.

***Surviving Progress*** presents us with thinkers who probe our primate past, our brains and our societies. Some amplify Wright’s urgent warning, while others have faith that the very doctrine of progress that has put us in jeopardy is also the key to our salvation. Theoretical physicist and cosmologist Stephen Hawking looks to homes on other planets. Biologist Craig Venter, whose team decoded the human genome, designs synthetic organisms he hopes will create artificial food and fuel for all.

Distinguished environmental scholar Vaclav Smil counters that five billion “have-nots” aspire to an affluent lifestyle, and without limits on the energy and resource consumption of the “haves,” humanity faces certain catastrophe. Others—including primatologist Jane Goodall, author Margaret Atwood and activists from the Congo, Canada and the United States—place their hope in our ingenuity and moral evolution.

***Surviving Progress*** leaves us with a challenge: to prove that making apes smarter was not an evolutionary dead end.

## ABOUT THE BOOK

*“We are running 21st-century software, our knowledge, on hardware that hasn’t been upgraded for 50,000 years, and this lies at the core of many of our problems.”*

— Ronald Wright

Written by Canadian novelist and historian Ronald Wright in 2004, *A Short History of Progress* looks at the modern human predicament in light of the 10,000-year-long experiment with civilization. In it Wright concludes that, to survive, human civilization needs to become environmentally sustainable, with specific reference to global warming and climate change.

Many of the problems that Wright relates to our civilization’s potential demise, such as climate change, debt and labour conditions in developing countries, can be connected to the way we live—specifically, to our participation in capitalist economies. The materials economy can be broken down into five parts—extraction, production, distribution, consumption and disposal—each of which has an impact on people and the planet.

## ABOUT THIS GUIDE

This educator’s guide was written to facilitate a meaningful discussion and debate in the classroom surrounding the various topics and concepts presented in ***Surviving Progress***. The film raises many issues and concerns that will challenge students to think about the so-called progress of human civilization and the impact of their daily actions at a local and global level. The classroom activities are designed to encourage students to think and speak critically about their daily choices and actions, and to take the discussion outside the classroom, into their everyday lives.

## RECOMMENDED AGE LEVEL

***Surviving Progress*** is suitable for students aged 15 and up. It is recommended that educators preview the film and research-related terms prior to teaching the unit, as it deals with complex concepts and ideas.

## RECOMMENDED SUBJECT AREAS

This film can be integrated into the curriculum in the following subject areas at the secondary and post-secondary level:

- Global Studies
- Social Studies
- Geography
- History
- Aboriginal Studies
- Agriculture
- Environmental Studies
- Economics
- International Development
- Political Science
- Human Rights
- Anthropology
- Business
- Science
- Science and Society
- Philosophy
- Technology Studies
- Media Studies

### TEACHING SURVIVING PROGRESS

This section of the study guide was written to introduce educators to the larger concepts, ideas and terms that are discussed in both the film and Ronald Wright's book. The content has been broken down into three parts: **Defining Progress**, which discusses the main thesis of Wright's book and the notion of a progress trap; **The Materials Economy: The Process of Progress**, an examination of various destructive processes involved in human consumption; and finally **The Impact of Progress on Our Planet**, an analysis of the implications of human progression and the consequences of our actions on the Earth.

If educators are considering teaching a comprehensive unit around this content, it is recommended that they utilize both the book and the film in the classroom.

### DEFINING PROGRESS

In *A Short History of Progress*, Ronald Wright argues that faith in progress has become an ideology, one taken for granted and whose flaws are no longer considered. He proposes the idea of a progress trap (a notion he reiterates in the film)—that is, a pattern of innovation that ultimately ends in a trap that puts humanity in jeopardy, as we are too successful for our own good.<sup>1</sup> Some examples of this are: hunting methods that are so efficient they result in the hunted animal becoming extinct; or weapon innovations that give humans the power to destroy the planet.

Wright's main thesis is that civilization has led to unsustainable population growth and the concentration of wealth. It has made way for warfare, disease and social and gender inequality. Lastly, the direction of human civilization has not even resulted in better health, as it has led to exchanging a varied diet of wild foods for a reliance on a few starchy crops. As the Irish Potato Famine of the 1840s revealed, reliance on a few crops puts populations at risk of starvation if the crop fails. And, as populations grow beyond the bounds of their food supply, the risk of starvation is real. While this risk may not be evident to many Canadians, "most people, throughout most of time, have lived on the edge of hunger—and much of the world still does."<sup>2</sup>

Of course, overpopulation is not the only threat to our existence on this planet; Wright argues that there are plenty of other ways in which human "progress" is threatening our existence on Earth.

### THE MATERIALS ECONOMY: THE PROCESS OF PROGRESS

Many of the problems that Wright relates to our civilization's potential demise, such as climate change, debt and labour conditions in developing countries, can be connected to the way we live and, specifically, to our participation in capitalist economies. The materials economy can be broken down into five parts—extraction, production, distribution, consumption and disposal—each of which has an impact on people and the planet.

**Extraction** refers to the processes by which we acquire the resources that are used to make the things we buy—for example, fishing, mining and cutting down trees. In many cases, extraction occurs in the developing world for consumption in First World countries. Examples include mining diamonds in Africa at the cost of many lives; or, as noted in the film, the deforestation of the Amazon rainforest—at an alarming rate—for raw materials or to create space for agriculture.

**Production** refers to the processes by which extracted resources are turned into goods. As is the case with resource extraction, production often happens in a different country than where the item will eventually be purchased, and the country of production is often a poorer nation with weaker labour and environmental laws. In many cases, toxic chemicals are used in manufacturing processes and end up in the products themselves. This situation not only means that workers in developing economies are exposed to toxins in the workplace, but also that buyers are exposed to a host of toxic chemicals in the products they use every day. Lipstick, for example, has been found to contain lead, a potent neurotoxin that is not legally allowed in gasoline or paint in many countries.<sup>3</sup>

**Distribution** refers to everything that happens to a product between the production stage and its arrival to a consumer, such as transportation and sales. As with production, workers in this part of the economy tend to be underpaid, which helps to keep distribution costs down. Just as the true cost of labour is not reflected in the price of an item, neither is the environmental cost. In the film, David Suzuki acknowledges how the environment is considered an "externality" in the economy: these costs are externalized, and the price of an item instead tends to be more reflective of what the consumer will pay.

**Consumption** refers to the facet of the materials economy in which products—be they food, clothes, vacations or computers—are purchased by consumers. It is the activity our culture is organized around and is constantly growing into new parts of our lives. A central principle of economics is that annual profit needs to exceed that of the previous year. In order to maintain a steady increase in profit, industry needs to create demand for products that we may or may not need. This is achieved in two ways: planned obsolescence and perceived obsolescence. Planned obsolescence means that goods are manufactured with an intentionally short lifespan so that consumers will have to buy more when they break or wear out. This phenomenon is evident in the many disposable products that have found their way into our lives—take coffee cups as an example—but it can also be seen in more substantial goods, such as computers. Perceived obsolescence is a diminishment of the social value of an item, as when an item goes out of style. Changing trends in fashion require consumers to buy new things to keep up, and a great deal of money and effort is put into advertising to reinforce our need for more.

**Disposal** is what happens when we are done with a product. The primary means through which this occurs is the dumping of waste into a landfill, where some of it will degrade over many years and much of it will remain forever. The garbage we produce pollutes our air, our land and our water, and emits gas that contributes to climate change.

1 *A Short History of Progress*, Ronald Wright, Anansi Press, 2004, pages 5, 6 and 8.

2 Wright, 65.

3 [environmentaldefence.ca/reports/heavy-metal-hazard-health-risks-hidden-heavy-metals-in-face-makeup](http://environmentaldefence.ca/reports/heavy-metal-hazard-health-risks-hidden-heavy-metals-in-face-makeup)

## THE IMPACT OF PROGRESS ON OUR PLANET

### CLIMATE CHANGE

Climate change is defined as “a significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years... It may be a change in average weather conditions or the distribution of events around the average (e.g., more or fewer extreme weather events).”<sup>4</sup> Scientific studies reveal that the rate of this change has increased dramatically over the last few decades and point to anthropogenic (human-made) causes, such as greater emissions of greenhouse gases. Most of these emissions come from burning fossil fuels for energy and transportation.

Climate change has been associated with such phenomena as rising sea levels, retreating glaciers and the depletion of permafrost, extreme weather events (e.g., heat waves and hurricanes) and species extinction. If these effects continue to develop at the current rate, the planet is expected to become unlivable for humans and other natural systems.

The current discussion among scientists is focused on how to prevent further warming and mitigate the effects. Scientists warn that if immediate global action is not taken to cut emissions, we will soon reach a tipping point beyond which we will lose the ability to stop further warming. Global warming is already occurring around the world, raising the possibility that more stored carbon will be released from increasing forest fires or from the thawing of Arctic permafrost, leading to “runaway climate change.”<sup>5</sup>

### EXTREME WEATHER

In many parts of North America, climate change has been most visible in a change in temperature. 2010 was the hottest year on record, and in the United States, 900 heat records were broken in July alone.<sup>6</sup> The incidence of heat waves and other anomalous weather is expected to increase as the global temperature rises.

However, heat waves are not the only effect of climate change: “A growing number of new scientific studies are confirming that warmer water in the top layer of the ocean can drive more convection energy to fuel more powerful hurricanes.”<sup>7</sup> While record-breaking hurricanes, like 2005’s Hurricane Katrina, have been increasing in magnitude, studies suggest that they are also increasing in frequency. The same year that Hurricane Katrina destroyed New Orleans and took 1,800 lives, the World Meteorological Organization had to revert to a new system of naming, as there were more hurricanes and tropical storms than names in the alphabetic naming schema.<sup>8</sup>

Tornado incidents are also on the rise, and the number of extreme weather events is only expected to increase the world over. While many people assume that climate change will result only in a rise in temperature and warmer weather overall, effects to date have come to be called “global weirding,” reflecting the fact that weather has been weird or unpredictable. Climate change is expected to continue exacerbating existing conditions and not exclusively those related to temperature: the hot places will get hotter, the dry places will get drier, and the wet places will get wetter.

### EXTINCTION AND INVASIVE SPECIES

As the Arctic Ocean’s ice cover depletes, the distance between icefields and floes increases. In the last 10 years, polar bears, which live on these icefields, have been drowning in significant numbers.<sup>9</sup> In North America, the number of days of frost has decreased dramatically in the last 20 years. Fewer days of frost means less time for winter’s cold to cut down the spread of invasive species (such as bark and pine beetles) that threaten forests and oceans.<sup>10</sup> Many of the causes of species extinction, such as Amazon deforestation, also contribute to climate change.

Another worrisome species extinction is coral bleaching, which occurs when the tiny organisms living within ocean coral become stressed by heat and other factors and evacuate, transforming what was once a multicoloured coral reef into a white or grey skeleton.<sup>11</sup> Loss of coral reefs is concurrent with climate change and is particularly marked in years in which heat records have been set. The chemical changes in our oceans that have resulted from climate change and pesticide runoff have left many “dead zones” where life used to flourish. Algal blooms, which thrive in warmer water, have appeared in unprecedented numbers, resulting in the closing of many coastal tourism operations around the world.

### ENVIRONMENTAL REFUGEES

While some nations are losing their way of life to desertification, rising sea levels resulting from melting ice caps are a threat to life on small islands. Some island nations are predicted to be completely underwater within the next few years. The president of Kiribati, a small island nation in the South Pacific, is currently purchasing up to 2,000 hectares of land in Fiji to relocate its 100,000 citizens.<sup>12</sup> Political leaders in the Maldives have also begun putting money aside and seeking land options for relocation.<sup>13</sup> Rising sea levels are expected to displace millions of people worldwide.

4 “Glossary – Climate Change,” Education Center – Arctic Climatology and Meteorology, NSIDC National Snow and Ice Data Center; Glossary, in Intergovernmental Panel on Climate Change, called “Third Assessment Report: Climate Change 2001 – Working Group 1: The Scientific Basis.”, [ipcc.ch/ipccreports/tar/wg1/518.htm](http://ipcc.ch/ipccreports/tar/wg1/518.htm)

5 [guardian.co.uk/environment/2006/oct/18/bookextracts.books](http://guardian.co.uk/environment/2006/oct/18/bookextracts.books)

6 [msnbc.msn.com/id/43785176/ns/weather/t/worst-heatwave-years-grips-midwest/#.T24MMo7q\\_yw](http://msnbc.msn.com/id/43785176/ns/weather/t/worst-heatwave-years-grips-midwest/#.T24MMo7q_yw)

7 *An Inconvenient Truth*, Al Gore, Rodale, 2006, page 81.

8 Gore, 103.

9 Gore, 146.

10 Gore, 154.

11 Gore, 164.

12 [climateactionprogramme.org/news/rising\\_sea\\_levels\\_force\\_pacific\\_islanders\\_to\\_evacuate/](http://climateactionprogramme.org/news/rising_sea_levels_force_pacific_islanders_to_evacuate/)

13 [redgreenandblue.org/2008/11/10/global-warming-causing-the-maldives-to-buy-new-homeland/](http://redgreenandblue.org/2008/11/10/global-warming-causing-the-maldives-to-buy-new-homeland/)



### **DEFORESTATION**

About 2,000 trees are cut down in the Amazon forest every minute.<sup>14</sup> Deforestation has both local and global impacts on the environment, and the worst of these is a loss of habitat for millions of species—70 per cent of our planet’s plants and animals live in forests and are losing more of their habitat every day.<sup>15</sup> Deforestation also drives climate change, as the trees no longer block the soil from the sun and keep it cool. Trees also play the critical role of absorbing climate-change-causing greenhouse gases; the reduction in tree coverage thus has obvious effects.

Deforestation is not only caused by manufacturing and agriculture, but also by population growth. As we multiply our numbers, we need to find new places to house people. In recent decades, housing development has become less efficient and more land intensive. This is not only a concern in other countries—urban development in Canada has been characterized by low-density, automobile-dependent construction on the far edges of city centres.

### **GLOBALIZATION**

Globalization refers to the growing global links between culture, people and economies. Most often the term is used when describing the movement of goods and products from one country to another, increasing the interdependence of the world’s markets and businesses. Globalization has a number of benefits, including increased opportunities for countries to share their goods with the world. Countries like China have gained access to global markets by becoming manufacturing centres for the rest of the world. Meanwhile, this same situation has severe consequences for other countries that often lose markets to places like China because they are unable to compete in the globalized economy.

### **GLOBALIZATION AND THE GLOBAL FOOD SYSTEM**

In the film, Chinese tour guide Chen Ming points to an increase in quality of life in his country over the past several years. He reports that tomatoes and other vegetables have become available year-round, when they used to only be in supply in the summer and fall. This increased access to fruits and vegetables at any time of the year points to a food system that has become significantly globalized. In Canada, we can eat oranges and bananas grown in the south without giving a second thought to where they were grown or how they arrived at our markets. As China becomes more connected to the global economy, its people will have access to a world of goods freed from restraints of location or seasonality.

While this development appears as a boon of capitalism, especially for those like Ming who crave a modern society and its endless conveniences and possibilities, it also comes with a host of negative effects. For one, a global food system in which produce is grown in one country, processed in another and transported to others to be sold creates a constant source of greenhouse gas emissions. In recent years, resistance to this wasteful element of the system has popularized the notion of “eating local” and “100-mile-diets,” particularly in Canada. The globalized food system also disconnects people from the source of their food. This has cultural implications, evident in the generation of children being raised with little idea of where their food comes from or what is involved in growing and producing it.

<sup>14</sup> [savetheamazonrainforest.com/web\\_folders/facts/more\\_facts/](http://savetheamazonrainforest.com/web_folders/facts/more_facts/)

<sup>15</sup> [environment.nationalgeographic.com/environment/global-warming/deforestation-overview/](http://environment.nationalgeographic.com/environment/global-warming/deforestation-overview/)

This situation can also have effects on a region’s food security. According to the World Health Organization (WHO), food security exists “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life.”<sup>16</sup> While this term is generally associated with poverty and the ability to afford enough food to feed one’s family, it is also relevant to a community’s ability to access healthy food, which can be hampered by political, industrial and natural circumstances. When a nation is unable to produce its own food (due to loss of farmland to development or environmental circumstances), it becomes reliant on global trade to provide for it. In a food system that is predominantly reliant on imported food, it is easy enough to imagine natural or political circumstances, such as a border closing or a natural disaster, that could cut the nation off from its source of food.

### **GLOBALIZATION AND DEBT**

Just as the global economy is fundamentally based on inequality, so too are international and domestic credit systems. As is referenced in the film, international lending arrangements are set up with prohibitive interest rates, which leave borrowing countries in a constant state of arrears, and lending countries in a position of profit.

Domestic banks are also driven by profit, which is acquired by collecting interest on loans. With no regulation to determine who is lent money, and bankers under pressure to increase profit, banks have been accused of making risky loans. The financial collapse in the United States in the last decade has been associated with banks lending money to people who were unable to pay it back within the terms of the agreement. This led to a domino effect of people overleveraging their credit, housing prices dropping, mortgages going bad and banks not being able to lend any more money, putting the brakes on an already slow-moving economy.<sup>17</sup>

Both scenarios demonstrate the necessity for debt regulation. Setting up loans to countries and people who will be unable to pay them back sets up a situation of systemic inequality and economic risk.

## DISCUSSION QUESTIONS

- 1 In his book, Ronald Wright defines a progress trap as a pattern of innovation that ultimately puts humanity in jeopardy. What are some examples of progress traps that are currently playing out in our society?
- 2 There is a scene in the film in which Chen Ming, a Chinese tour guide, and his father are arguing. What is the significance of their differing opinions about the modernization of China? How is the generational divide different than it would be for Canadians (or those in other developed countries) of the same ages?
- 3 The film points to how the First World capitalist economy is served by, for instance, mining in Africa and deforestation in Brazil to provide raw materials to multinational corporations. How does this create inequality between countries and citizens?

<sup>16</sup> [who.int/trade/glossary/story028/en/](http://who.int/trade/glossary/story028/en/)

<sup>17</sup> [topics.nytimes.com/top/reference/timestopics/subjects/c/credit\\_crisis/index.html](http://topics.nytimes.com/top/reference/timestopics/subjects/c/credit_crisis/index.html)

- 4 The film discusses a scientific technology that enables humans to clone animals. What are some of the ways this would be significant on a cultural, social or political level? What political rights would a manufactured person have?
- 5 Will technology be able to solve the problems that threaten our planet and save us? Formulate your answer with specific examples encountered in your own life.
- 6 Energy expert Vaclav Smil problematizes the “stubbornness of material culture”—that is, our continued reliance upon and devotion to material or consumer culture. What are some ways that people could reduce this “stubbornness”? Can they succeed?
- 7 In his book and in the film, Wright raises the notion of moral progress. He states, “We no longer give much thought to moral progress—a prime concern of earlier times—except to assume that it goes hand in hand with the material.”<sup>18</sup> What does Wright mean by “moral progress”? Do you think moral progress is possible in a society that places so much weight on material and scientific progress?
- 8 What are the benefits and costs of globalization? Explore the pros and cons of globalization for both wealthy and poor countries.
- 9 Where will progress lead humanity? What impact will continual technological growth and advancement have on our future? Do you think the current rate of growth is sustainable?

## MEDIA LITERACY

When watching a film, have you ever wondered why the director chose to tell the story in the format that they did? Consider *Surviving Progress*. Why would filmmakers Mathieu Roy and Harold Crooks turn an already successful book into a documentary? A story can take many shapes: it can be an oral story, an article in a newspaper, a radio segment, a book, a television program, an animated film, a fiction film or a documentary. Consider the visual elements of the documentary format and discuss how it may—or may not—be the best medium to retell Wright’s *A Short History of Progress*.

When examining a documentary, we must consider how the information is presented and how the visual elements are constructed by the filmmakers. To understand and “read” a film, one must learn the language of filmmaking. When you understand filmic language, you will better understand the process of constructing a narrative in order to convey a message or a story. The terms discussed in the following section are the most common visual techniques used in documentary films and can be referred to as conventions of the documentary.

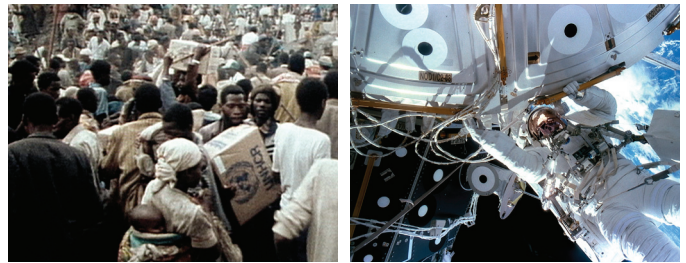
## VISUAL ELEMENTS OF DOCUMENTARY FILMS

**Direct Cinema:** a style of documentary based upon footage that is captured without the action being staged, with the camera observing in the manner of a fly on the wall.



Discussion Questions: Can you identify examples in *Surviving Progress* where direct cinema footage is used? Why does a documentary filmmaker capture footage from actual events? How does watching an event occur in real time change or enhance our viewing experience? What does direct cinema accomplish that other documentary techniques do not?

**Archival Footage:** footage that was captured in the past and is integrated into a film to present historical events.



Discussion Questions: How do you think archival footage adds to a documentary’s credibility? How do the filmmakers behind *Surviving Progress* use archival footage to support their ideas? Can you think of any examples from the film?

**Interviews:** footage of people speaking directly and authoritatively about the subject of the film. This technique is used commonly in documentaries, as it allows for numerous perspectives from a wide variety of people, such as experts on the subject, people who are directly impacted by the subject, or those who offer their personal opinions.



Discussion Questions: What role do the interviewees play in *Surviving Progress*? Did someone’s personal opinion in the film sway your opinion on the subject? If so, how and why?

18 Wright, 3



**Re-enactments:** reconstructions of events related to the subject of the film that are staged and acted out and/or digitally rendered.



Discussion Questions: The re-enactments in *Surviving Progress* reinforce a political position. Who does the man in the suit represent? What are some other provocative images or sequences found within the film and why might they have been used?

**Photographs:** still-photography footage used to present factual evidence to support the filmmakers' views on the subject.



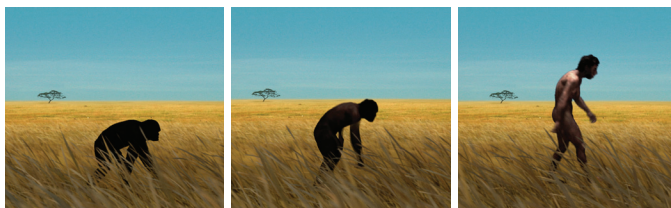
Discussion Questions: What is the role of a still photo in a moving picture? How is it effective to use still photos in a documentary? Can you think of examples when photos are used in other documentaries (e.g., investigative documentaries)?

**Documents:** scanned images of documents used in documentaries to present factual evidence and primary research in support of the filmmakers' views on the subject.

Examples of documents used in documentary films include newspaper clippings, printed e-mails, a contract, a will or legal documents.

Discussion Questions: Why would a filmmaker use a document when they could speak about the subject? Does it add authenticity or credibility to the documentary?

**Animation:** sequences rendered through a variety of means (digital, traditional, etc.) when live-action footage cannot be obtained. It may also be used to enhance the visual look of the film.



Discussion Questions: How do you think animation changes the content of a film? How does a viewer's relationship change when watching an animated character versus a real person?

## CLASSROOM ACTIVITIES

The following classroom activities were designed to strengthen the students' understanding of the ideas and terms discussed in the film. The activities emphasize the importance of thinking critically about progress and whether it is enhancing or destroying lives. The activities also demonstrate how these large concepts enter the lives of the students through their everyday choices and actions, and allow them to participate in meaningful discussions about the materials that surround them. The activities range in duration and can take anywhere from two hours to three full days to complete. The approximate length required for completion is noted after the activity description.

- 1 Assign each group of students a province or territory and ask them to explore its natural resources. Have students research the natural resources available in the province, how they are extracted, how the people of the province depend on these resources and how they are utilized outside of the province. Extend the research by having students look at the economy of the natural resources and their impact on the environment. (Approximately 3½ hours)
- 2 Have each student pick a farmed item and create a map depicting the route the item takes from the farm to their table. Compare and contrast the journey today versus the journey 30 years ago. Has it changed? If so, how? (Approximately two hours)
- 3 Have students choose an item that they own (e.g., a cellphone or sweat-shirt) and research its production from start to finish. What raw materials are required? Are they all found in the same country? Where is it manufactured? Why is it manufactured there? How is it made? What are the rights of workers in that region? How does it get to Canada? How often do we replace this item? What happens to it once we are finished with it? (Approximately five hours)
- 4 Students will work in pairs, researching an interviewee from the film (e.g., David Suzuki or Raquel Taitson-Queiroz, the Brazilian environmental police officer) and considering their expertise and specialization. What research have they conducted or experience do they have that makes them an expert in their field? What makes them a credible resource to support the film's overall thesis? One student will take on the role of the director, preparing 10 questions to ask, while the other will take on the role of the interviewee. The students will then perform their documentary interview for the class. (Approximately four hours)
- 5 Have students create their own documentary films, combining the various visual elements discussed in the Media Literacy section above. The starting point of their films will be the question, What is progress? Begin the activity by having students write a one-page synopsis of their film's discussing how they will answer this question. Have students outline how they will incorporate the various visual conventions of documentary. They will need to make choices and explain their reasoning: will they conduct interviews, use archival footage, stage re-enactments, cite documents or create animation? Additionally, have students write a documentary script. This is a common tool for documentary filmmakers. It acts as a visualization guide in order for the filmmaker and his/her crew to know what shots, interviews, archival footage, etc., they are seeking. It can be formatted similarly to a transcription of a documentary. Find the full transcription of the film *Surviving Progress* here: [survivingprogress.com/wpcontent/uploads/2012/03/SP\\_transcription.pdf](http://survivingprogress.com/wpcontent/uploads/2012/03/SP_transcription.pdf). If students decide to use interviews



in their documentary films, they can use this tipsheet on the Documentary Interview, which includes everything from thorough research to group interviews, available on the NFB Blog: [blog.nfb.ca/blog/2010/02/05/interview-tips-for-documentary-filmmaking/](http://blog.nfb.ca/blog/2010/02/05/interview-tips-for-documentary-filmmaking/). Creating a film can be a large project, so have students work in small groups and serve in different production roles, such as director, cinematographer or editor. Also, restricting the films to a maximum of two to five minutes can help students keep their works concise and focused. (Approximately three days)

## WHO'S WHO IN SURVIVING PROGRESS

**Ronald Wright** is a Canadian novelist and historian. Wright was selected to give the 2004 Massey Lectures. His contribution, *A Short History of Progress*, looks at the modern human predicament in light of the 10,000-year experiment with civilization. In it he concludes that human civilization, to survive, would need to become environmentally sustainable, with specific reference to global warming and climate change.

Quote: “*We are running 21st-century software, our knowledge, on hardware that hasn't been upgraded for 50,000 years, and this lies at the core of many of our problems.*”

**Margaret Atwood** is a Canadian novelist who lives in Toronto. She is the author of more than 50 volumes of poetry, children's literature, fiction and non-fiction and is perhaps best known for her novels, which include *The Edible Woman* (1970), *The Handmaid's Tale* (1983), *The Robber Bride* (1994), *Alias Grace* (1996) and *The Blind Assassin* (2000), which won the prestigious Booker Prize. Her non-fiction book, *Payback: Debt and the Shadow Side of Wealth* (2008), was part of the Massey Lecture series.

Quote: “*Instead of thinking that nature is this huge bank that we can just... this endless credit card that we can just keep drawing on, we have to think about the finite nature of that planet and how to keep it alive so that we, too, may remain alive. Unless we conserve the planet, there isn't going to be any 'the economy.'*”

**Colin Beavan** is a book writer, blogger and activist. In 2006, Beavan launched a year-long project in which he, his wife, his two-year-old daughter and his four-year-old dog went off the grid and attempted to live in the middle of New York City with as little environmental impact as possible. His experiment, dubbed No Impact Man, exploded in the media after being featured in *The New York Times*, and he has since come to be considered one of the spokespeople for the environmental movement.

Quote: “*Before I go around trying to change other people, maybe I should look at myself and change myself and keep my side of the street clean.*”

**Jane Goodall** is a British primatologist and author. She is considered to be the world's foremost expert on chimpanzees, and her Jane Goodall Institute is a global leader in research to protect them and their habitat. She is a devoted vegetarian and animal rights activist.

Quote: “*Arguably, we are the most intellectual creature that's ever walked on Planet Earth. So how come, then, that this so intellectual being is destroying its only home?*”

**Stephen Hawking** is a theoretical physicist. He is known for his work on cosmology, the basic laws that govern the universe, and for predicting that black holes, instead of being completely black, should emit radiation. This is known as “Hawking radiation.” He has ALS, a motor neuron disease, and speaks through a speech-generating device.

Quote: “*We are entering an increasingly dangerous period of our history. But I'm an optimist.*”

**Marina Silva** is a Brazilian senator and former minister of the environment. She is known internationally for her role in protecting the Amazon by creating policies to promote sustainable development in the Amazon region. Before she resigned as minister in 2008, she was one of the few environmental voices left in Brazil's government.

Quote: “*It is impossible to defend models that cannot be universally applied because we would have to start from a premise that some people have rights and some don't. Thus, there is no technological problem, but an ethical one.*”

**David Suzuki** is an award-winning Canadian scientist, environmental activist and broadcaster. He is the host of CBC Television's science program, *The Nature of Things*. An ardent climate-change activist, he founded the David Suzuki Foundation in 1990; the foundation works on mitigating climate change and promoting alternative energy, protecting oceans and promoting safe fishing and sustainability.

Quote: “*Money doesn't stand for anything and money now grows faster than the real world. Conventional economics is a form of brain damage.*”

**J. Craig Venter** is an American biologist who is working to map the genetic diversity of the world's oceans. He is known for being the first to sequence the human genome and for creating the first cell with a synthetic genome in 2010. His company, Synthetic Genomics, is working to invent and commercialize new sources of energy and new vaccines.

Quote: “*Changing and taking over evolution, changing the time course of evolution and going into deliberate design of species for our own survival at least gives us some points of optimism that we have a chance to control our destiny.*”

**Robert Wright** is an American journalist and author who focuses on science, religion and game theory. In his book *Nonzero: The Logic of Human Destiny*, he argues that, with the direction of biological and cultural evolution, today's interdependent global society was, if not inevitable, “so probable as to inspire wonder.”

Quote: “*Half of being God has just been handed to us, and then the question is whether we'll master the other half of being God, the moral half.*”

## RESOURCES AND SUGGESTED READING

### NFB CAMPUS FILMS

(Available for streaming on NFB.ca with a subscription to CAMPUS):

**Arctic Circle – Episode One: On Thin Ice**

(Directed by Wally Longul, Atsushi Nishida and Takashi Shibasaki, 2009, 41 min)

**Arctic Circle – Episode Two: Battle for the Pole**

(Directed by Wally Longul, Atsushi Nishida, Takashi Shibasaki and Yoichiro Yamamoto, 2009, 40 min)

**Force of Nature: The David Suzuki Movie**

(Directed by Sturla Gunnarsson, 2010, 92 min)

### NFB FILMS

**Climate on the Edge**

(Directed by Alain Belhumeur, 2003, 52 min)

**For Man Must Work or The End of Work**

(Directed by Jean-Claude Burger, 2000, 52 min)

**Manufactured Landscapes**

(Directed by Jennifer Baichwal, 2006, 86 min)

**Payback**

(Directed by Jennifer Baichwal, 2011, 90 min)

**Refugees of the Blue Planet**

(Directed by H el ene Choquette, 2007, 57 min)

**Trouble in the Forest**

(Directed by Gary Toole, 1988, 47 min)

**WAL-TOWN The Film**

(Directed by Sergeo Kirby, 2006, 66 min)

### NFB INTERACTIVE DOCUMENTARIES

**Barcode.tv**

(NFB and ARTE co-production, 2011)

[codebarre.tv/en/#/en](http://codebarre.tv/en/#/en)

**Territories**

(Created in partnership with *Le Devoir*, 2011)

[territories.nfb.ca/#/territories/](http://territories.nfb.ca/#/territories/)

### BOOKS

*An Inconvenient Truth*, Al Gore, Rodale, 2006.

*No Logo: Taking Aim at the Brand Bullies*,

Naomi Klein, Vintage Canada, 2000.

*Payback: Debt and the Shadow Side of Wealth*,

Margaret Atwood, Anansi Press, 2008.

*A Short History of Progress*,

Ronald Wright, Anansi Press, 2004.

## CREDITS

This guide was produced by NFB Education. It was written by Erin Charter, Communications Adviser, Environmental Defence; and Anne Koizumi, NFB Education Specialist and Workshop Facilitator. Contributions were made by Tey Cottingham, Adviser, NFB Educational Programs; Claudia Sicondolfo, NFB Team Leader and Education Specialist; and Kelley Alexander, NFB Marketing Manager of *Surviving Progress*.