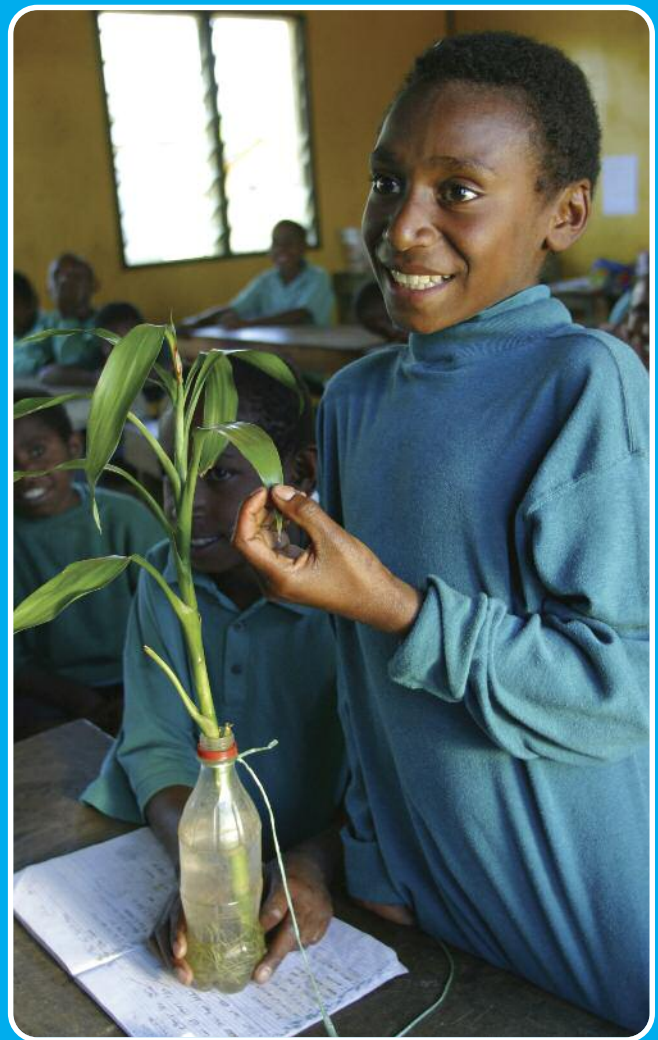


CLIMATE CHANGE, CHILDREN AND YOUTH



Local Connections to Global Issues

TEACHER RESOURCE GUIDE
Grades 9-12

unicef 
canada

global classroom



Canadian International
Development Agency

COVER PHOTOS

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Bangladesh, 2000

In Bangladesh, standing in the rain, an adolescent girl, Rasheeda, plucks leaves from a tree in front of her house in the village of Chandai in Manikganj district, west of Dhaka, the capital.

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Pakistan, 2008

Alam (10 years old) collects water from an agricultural canal for his animals in Basti Arian village in the Rahim Yar Khan District in Punjab Province, Pakistan.

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India, 2003

Girls go fishing in the village Jamsaut in India, an impoverished area where the Musahar caste, also called "rat eaters", live. They are excluded from the Indian educational system and many of the girls have to overcome great cultural obstacles to attend school. UNICEF started an education center for girls in the area.

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New Guinea, 2004

A girl presents a plant that she has helped grow as part of a science project at the Ulga Catholic Mission in Papua New Guinea. Girls' education is hindered by the fact that most girls must work in agriculture to help support their families. In 2004, the Government launched the UNICEF-supported Accelerate Girls' Education program in six provinces, which aims to eliminate social, cultural, safety and economic obstacles to education, and raise awareness that education is a basic right for all children, including girls.

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Fiona Zawadzki is a sustainability educator who has developed resources and in-class presentations including co-founding Green Bricks Education Society (www.greenbricks.ca), which involves youth in sustainable land use and development. Kelly Quinlan is the Education Manager for UNICEF in British Columbia, and Paula Gallo is the Senior Education Manager for UNICEF Canada.

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"This resource goes beyond educating our adolescents on the impacts of climate change; it encourages meaningful local actions that are within the reach of every student." (Bogna Haddad)

INTRODUCTION

THANKYOU for inviting UNICEF Canada into your classroom. This guide has been created to support secondary school educators in their efforts to work with youth to take action on climate change. Through the thought-provoking activities contained here, students will have the opportunity to nurture their compassion and discover how climate change is affecting children around the world, especially children in developing countries. We aim to provide you with tools that will support your students in their efforts to affect meaningful and lasting change, and inspire them to take action at a local level.

This guide explores the scientific facts of climate change without leaving students with a feeling of despair. Educators can provide youth with the knowledge of the issues facing their future, the tools to explore solutions, and a sense of awareness that they have the capacity to make a difference. The goal of this guide is to inspire both teachers and students to connect local issues to global concerns and develop the attitudes needed to change our world for the better.

Here's what educators are saying about this guide:

"This guide will help teachers reach the goal of making our students educated, global citizens." (Jennifer Mahon)

"This guide is a key resource for any social action-oriented educator." (Bogna Haddad)

"It is evident that the preparation of this resource was extensive. The links, specifically multimedia, are superb." (David Weightman)

"Included are great project ideas that students can personalize for their own needs and community." (Demetra Kotsalis)

This guide contains interactive activities and support documents around six interconnected themes, as presented in the UNICEF UK's Climate Change Report 2008: *Our climate, our children, our responsibility*. This report details how the issues threatening the survival of children in developing countries link with the impacts of climate change.

The themes in this resource can stand alone, or be delivered in combination. Also provided is an introductory activity (page 14) to connect all the themes. The themes are identified as:

- Food Security
- Health
- Natural Disasters
- Natural Environment
- Water
- Energy

This guide is designed for Grade 9 to 12 educators across Canada in order to fulfill curriculum expectations (including the revised 2008 Ontario curriculum) in the following subjects:

Province	Curriculum Connections
Alberta	Science 9; Science 10, 20, 14, 24; Biology 20 ; Social Studies 20; and Environmental and Outdoor Education Junior High
British Columbia	Science 9 and 10; Sustainable Resources 11 and 12; Civics 11; Geography 12
Saskatchewan	History 11; World Issues 11; Biology 11; Physics 12

Manitoba	World Geography 12; Biology 12; Science 10; World Issues 10; World Geography 12
Ontario	Science 9 Academic & Applied; Science 10 Applied; Biology 11; Chemistry 11; and Environmental Science 11
Quebec	Social Sciences: Geography, History and Citizenship Education, and Contemporary Economic Environment; Secondary English Language Arts
Atlantic Canada	Atlantic Canada in the Global Community 9, Science 9, Science 10, Biology 11, Physics 11, Global Geography 12, Global History 12

This guide was initially created to support Ontario and British Columbia curriculum connections, but we have since added connections across Canada, which can be found in Appendix I and online.

UNICEF CANADA'S GLOBAL CLASSROOM PROGRAMME

The goal of UNICEF Canada's Global Classroom programme is to move a generation of Canadians from awareness of global issues affecting children to personal involvement and informed action. Working with educators, students, parents and governments at all levels, the Global Classroom is fostering a commitment in Canada's rising generation to social justice, human rights and support for Canada's humanitarian engagement on international issues.

UNICEF supports teachers with professional development opportunities to help them bring challenging global issues into the classroom. Across Canada, thousands of teachers are committed to global education. Science teachers, math teachers, geography teachers; across the curriculum, global education has relevance to the daily lives of students and to their capacity to navigate a rapidly changing world. UNICEF connects with many of these teachers at workshops, at conferences and through a variety of education partners.

UNICEF collaborates with educators to develop curriculum-linked resources and events to promote global education.

With our partners in the education sector, UNICEF produces and distributes print, electronic and online resources for global education linked to provincially mandated curricula. Make sure you check out our Global Classroom website, at <http://globalclassroom.unicef.ca/>, or in French, <http://lemondeenclasse.unicef.ca/fr/> to find relevant and timely resource guides to use in your classroom. You can also sign up for our quarterly newsletter, and find out about global education across Canada.

To further explore the science of climate change in your classroom, UNICEF Canada has posted online resources and lesson plans at http://globalclassroom.unicef.ca/climate_change_resource_guide.

UNICEF provides young people with opportunities to learn about the key issues affecting children around the world and to take action in support of the world's children. UNICEF designs print and electronic resources specifically for and with young people. Through interactive web-based features, special events, campaigns on issues including malaria and HIV and AIDS, and close to 400 live presentations every year, we motivate thousands of elementary, secondary and university students across Canada to learn and do more.

UNICEF also coordinates international conferences for young people that coincide with and connect Canada's youth to world leaders. The UNICEF Junior 8 Summit is an annual event, which invites high school students across Canada to develop their ideas about issues on the G8 agenda. The winning team then travels to the G8 Summit, where youth delegates from around the world discuss their perspectives and share them directly with the G8 leaders. The winning team



in 2009 was Carpe Diem, from London, Ontario. Their suggestions involving how best to tackle climate change can be found on our website at

http://moveyourworld.unicef.ca/en/involved/secondary_junior8.htm or in French, http://moveyourworld.unicef.ca/fr/involved/secondary_junior8.htm

COP15

The United Nations Climate Change Conference took place in Copenhagen, Denmark in December 2009. This conference, which is also known as COP15, brought together close to 20,000 delegates from around the world for a historic high-level meeting on climate change. The goal was to build on agreements reached as part of the Kyoto Protocol (1992), and to reach a new, comprehensive and far-reaching agreement on key climate change issues, including mitigation, adaptation, the financial architecture to support climate action and the technology transfer to facilitate a transition to low-carbon growth paths. For final results of the Conference, reference the Web site at <http://en.cop15.dk/>

As climate impacts are likely to worsen over the years and decades to come, today's children — and tomorrow's children — will be the greatest beneficiaries of a successful international deal on climate change.

On this occasion, the City of Copenhagen and UNICEF organized a Children's Climate Forum to give children from both developing and industrialized countries a voice in this debate, and a chance to influence the important discussions at COP15.

The young people attending met with other young activists from around the world, and were offered an incredible opportunity to connect with and influence the world leaders who continue to make historic decisions regarding the future of our world.

UNICEF has also launched an online platform where thousands of children from around the world have the opportunity to collaborate on solutions, and present their ideas to world leaders and decision makers. Check out <http://uniteforclimate.org/>, or in French, <http://uniteforclimate.org/?lang=fr> for details, and make sure to connect your students to this unique opportunity.

The lessons learned at the Children's Climate Forum will help today's children adapt and respond to rapidly changing environments — and contribute to meaningful and sustainable change. Together, we can support young people in addressing these challenges.

UNITED NATIONS CONVENTION ON THE RIGHTS OF THE CHILD (UNCRC)

UNICEF was created by the UN General Assembly on December 11, 1946 as a temporary organization called the United Nations International Children's Emergency Fund, to respond to the suffering of children in European countries devastated by World War II.

In 1953, UNICEF was made a permanent arm of the UN to address the plight of children in Asia, Africa, the Middle East and Latin America. Its name was changed to the United Nations Children's Fund although the acronym (UNICEF) did not change.

UNICEF is funded entirely by voluntary contributions from individuals, businesses, foundations, schools, associations and governments. The world's largest provider of vaccines for developing countries, UNICEF supports child health and nutrition, safe water and sanitation, quality basic education and the protection of children from violence, exploitation and HIV and AIDS.

UNICEF's work with children around the world is not just a moral assertion, it is codified in the UN Convention on the Rights of the Child (UNCRC)—the world's most widely ratified human rights treaty, adopted by 193 countries, including Canada. The CRC states that children have the absolute right to live in a decent environment with all that implies: living and growing in safety, enjoying good health and attending school.

There are 54 articles that comprise the UNCRC, all interrelated. What follows are the key articles relating to climate change, as outlined in the UNICEF UK Climate Change Report 2008.

Article 6: Children have the right to live. Governments should ensure that children survive and develop healthily.

Article 12: When adults are making decisions that affect children, children have the right to say what they think should happen and have their opinions taken into account.

Article 22: Children have the right to special protection and help if they are refugees (if they have been forced to leave their home and live in another country).

Article 24: Children have the right to good quality health care—the best health care possible—to safe drinking water, nutritious food, a clean and safe environment, and information to help them stay healthy. Rich countries should help poorer countries achieve this.

Article 28: All children have the right to a primary education, which should be free. Wealthy countries should help poorer countries achieve this right.

Article 38: Governments must do everything they can to protect and care for children affected by war.¹

For details on all 54 articles, refer to Appendix D: The UN Convention on the Rights of the Child in Child-Friendly Language.

WHY IS UNICEF TACKLING CLIMATE CHANGE?

UNICEF is mandated by the United Nations General Assembly to advocate for the protection of children's rights, to help meet their basic needs and to expand their opportunities to reach their full potential, and so it has joined the fight to protect our children from the impacts of climate change.

Children in developing countries will be the hardest hit by climate change. Because climate change reduces the availability of food in developing countries, children will not have the food they need to sustain their growth and maintain a healthy disposition. Already children in developing countries suffer from poverty, poor water and sanitation, lack of water and poor health. The effects of climate change exacerbate these issues. In addition, developing countries do not have the resources to quickly and safely adapt to the effects of climate change alterations in weather patterns, droughts, floods and the increase in the number and severity of natural disasters.

However, children are also a strong voice in the fight against climate change. According to a recent UNICEF Innocenti Research Centre report called *Climate Change and Children: A Human Security Challenge*, children are among the greatest victims of climate change. But they can also act as vehicles for change, as children from developed nations can work with the adults in their lives to bring about meaningful and sustainable change. Therefore, we need to educate today's youth to be "proactive and prepared citizens empowered to adapt and respond to rapidly changing environments. An education, which will prompt young citizens to question and modify existing conditions and structures moving toward enhanced development objectives and disaster risk reduction and preparedness activities."²

Visit UNICEF's Press Centre at <http://www.unicef.org/media/>. These pages are updated daily with the latest news from UNICEF around the world and will keep you posted on UNICEF's commitment to the environment.



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Scientists once referred to the issue as 'global warming' but today the term 'climate change' is more widely used as it encompasses both the changes in the temperature (warming) and the changes in weather patterns such as severe storms and melting of the glaciers.

CANADA'S RESPONSIBILITY TO DEVELOPING NATIONS

In 1987, the World Commission on Environment and Development (WCED) published a report commonly referred to as the Brundtland Report. This groundbreaking work detailed guiding principles for sustainable development and continues to act as the road map for sustainability today. This report defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."³

A key concept of the Brundtland Report that is now commonly accepted is that of the three pillars of sustainability. Simply stated, sustainability cannot be understood as just the environment, there are three factors or pillars that also need to be considered:

- Environment
- Economics
- Society: adults and children.

Our children's future depends on a balance between the three pillars. We need to nurture and preserve our planet, have the resources (money and labour) to make this happen and ensure global human needs are met.

As developed nations are fortunate to have in place the resources to balance the three pillars, it is the responsibility of nations like Canada to support developing countries in their struggles with climate change, as stated in Article 24 of the UN Convention on the Rights of the Child:

Children have the right to good quality health care — the best health care possible — to safe drinking water, nutritious food, a clean and safe environment, and information to help them stay healthy. Rich countries should help poorer countries achieve this.

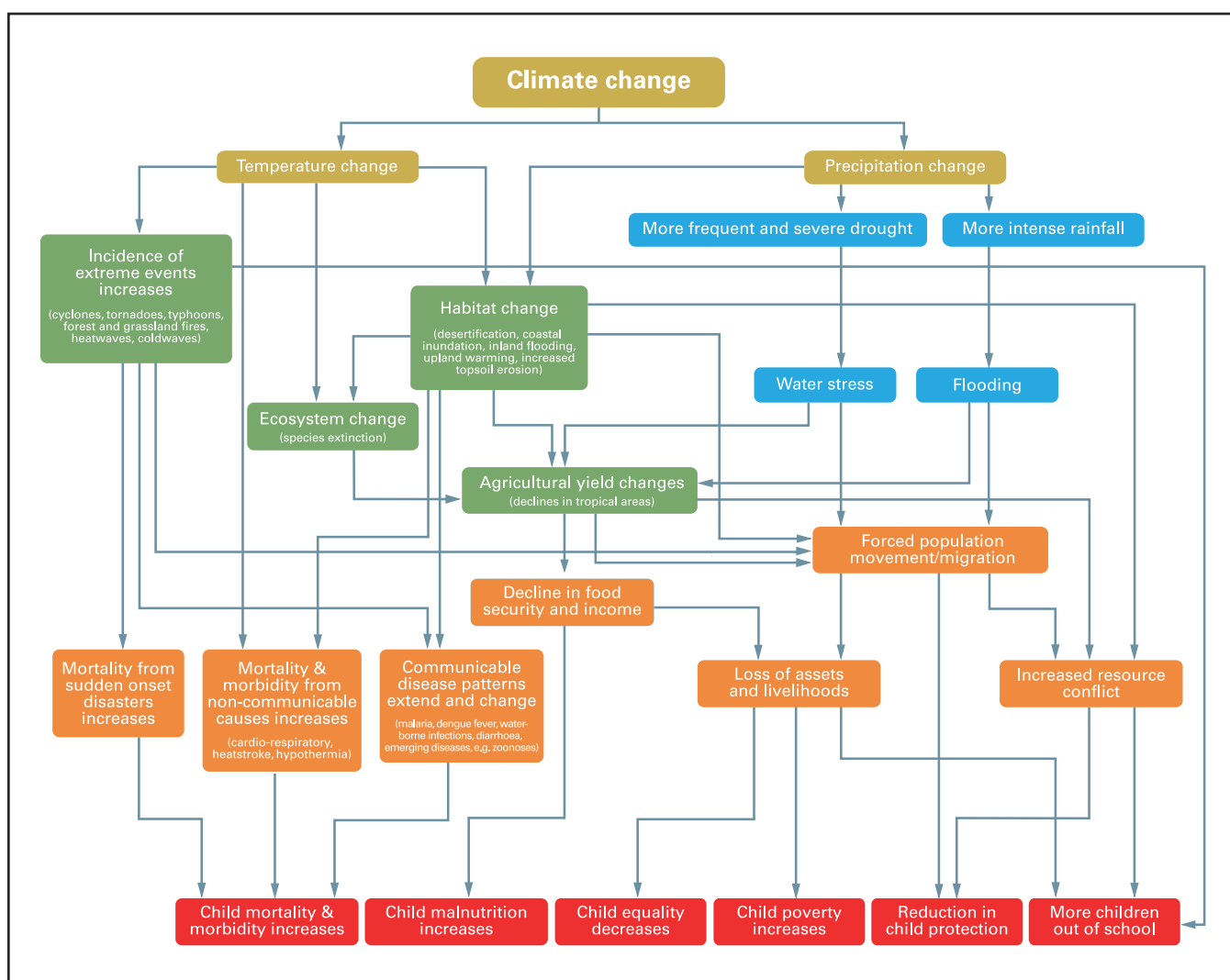
The reality is that citizens of developed nations continue to have the greatest impact on climate change; we are dependent on fossil fuels and overall consumerism to sustain our current standard of living. We need to do our part in restoring the balance of our world and help children in developing countries affected by our actions. We need to educate our youth on solutions, inspire them to take action and lead by example. As we adapt to ending the dependency on fossil fuels and appreciate the value of our natural treasures, we will learn what makes us strong as a global community — the human spirit.

CLIMATE CHANGE CONNECTIONS

Climate change is defined as the increase in Earth's temperature due to human impact by way of greenhouse gas emissions. Gases, such as carbon dioxide, build in the atmosphere and form a barrier. This gaseous wall lets the heat from the sun into our atmosphere but does not let it escape, resulting in the warming of the planet. The increase in global temperature means alterations in the world's weather patterns and rising sea levels.

The effects of climate change cannot be viewed in isolation; they are all connected. For example, as the water cycle intensifies both drought and flooding increase. This affects agriculture, increases the likelihood of waterborne disease, and can negatively affect what was once a fertile land rich with resources.⁵

The citizens most vulnerable to climate change and its many connections are children. Since children have developing immune systems and rely on proper nutrition and clean water to progress into adulthood, they are less likely than adults to weather the effects of climate change. A summary of the key impacts of climate change on children is presented schematically below.⁶



GUIDE OVERVIEW

This guide contains a series of activities with accompanying handouts connected to the six themes: natural disasters, food security, health, natural environments, water and energy.

Each theme includes the following sections:

- **Activities:** interactive and thought-provoking student activities to explore each theme
- **Backgrounder:** informative facts and statistics providing the background basics for the educator and/or student to facilitate each theme
- **Youth Take Action Handout:** inspirational profiles and student projects challenging youth to make change
- **Student Handouts:** easy-to-understand student handouts accompanying each activity

Distribute the handout found on page 105 (Appendix G: Reflect and Act). This handout will allow students to journal lessons learned throughout each theme, or can be used to summarize lessons learned from the entire unit.

The glossary (addressing the underlined words in the guide) and other appendices (including the curriculum expectations/outcomes, United Nations Convention on the Rights of the Child, and a culminating task rubric), can be found in Appendix C.

Please note that all websites referenced in the themes were accurate at the time of printing. UNICEF Canada apologizes for any inconvenience that may be caused due to an inactive link.

Share photos of your students working towards a sustainable lifestyle. Please email photos to UNICEF Canada at globalclassroom@unicef.ca



Youth participate in a UNICEF "Water Walk," an interactive activity designed to raise awareness about water issues around the world, in Port Alberni, BC.

EDUCATORS – LET’S GO GREEN!

Students learn by example. Challenge yourself and your colleagues to make a difference and ‘walk the talk.’ It is empowering for students to see how your small changes can make a big difference. Here are some ideas:

- walk, run, bike, train, bus or car pool to school
- have organic, fair-trade coffee and local food for staff social events
- use a reusable travel mug and water bottle
- pack waste-free lunches
- green your classroom; reuse paper, start a worm compost in your classroom, recycle blue bin items
- open the blinds and turn off the lights in the classroom.

At your next staff meeting, gather your colleagues and agree to challenge another school to have the greenest staff! How can you get your students involved in the solution?

Meet two amazing teachers who are leading by example:

- Susan Ng Chung, a science teacher at Prince of Wales Secondary in Vancouver is leading by example. Susan commutes to school on two wheels every other day.
- Graeme Mitchell, a teacher at Stelly’s Secondary School in Saanich, BC, developed a popular course called Sustainable Development for Grade 11 students. The goal is to shed light on models, tools and ideas that already exist, and, that if widely adopted, would completely change our world for the better.

NOTES

- 1 UNICEF UK, *Our climate, our children, our responsibility* (York: UNICEF UK, 2008), p. 12.
- 2 UNICEF Innocenti Research Centre, *Climate Change and Children: A Human Security Challenge* (Florence: UNICEF Innocenti Research Centre, 2008), p. 2.
- 3 World Commission on Environment and Development, *The Brundtland Report*, <http://www.un.org/documents/ga/res/42/ares42-187.htm> (accessed November 2009).
- 4 Toronto District School Board, *Ecoschools: Climate Change in Grade 11 and 12 Science* (Toronto: Toronto District School Board, 2004), p. 9.
- 5 UNICEF UK, *Our climate, our children, our responsibility*, p. 4.
- 6 Ibid., p. 3.