



# Climate Change Resources For Teachers 2017



# Climate Change Resources for Teachers

*Climate change is a problem of global proportions whose solution may collectively be our greatest challenge.*<sup>1</sup>

COP 21 has set a new global agenda to address climate science, climate impacts, mitigation actions and adaptation measures. Here in Canada the new Federal government has made significant action on climate change part of the general mandate of every Minister.<sup>2</sup> Leadership on this cross-cutting issue is central to the mandate of the newly renamed Department of “Environment and Climate Change:”

“[Y]our overarching goal will be to take the lead in implementing the government’s plan for a clean environment and a sustainable economy. Your key priority will be to ensure that our government provides national leadership to reduce emissions, combat climate change and price carbon. I expect you to help restore Canada’s reputation for environmental stewardship.”

Success in moving Canada toward a “clean environment and a sustainable economy” will require support and buy-in at all levels of Canadian society that can only be achieved through increased awareness, education, and skills development for the general public, private and public sectors, and especially for youth.

The scope and complexity of climate change presents educators with a formidable challenge. Understanding climate change involves phenomena that cross traditional school subject boundaries ranging from geosciences to media and requires that one have a grasp of the process of change and an understanding of system dynamics. Many climate change scientific findings challenge broadly held societal beliefs and ambitions. How society is presently responding provides an ideal context for new learning.

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<sup>1</sup> Weather, Climate and Climate Change: Key Themes in Education for Sustainability, Learning for a Sustainable Future, 2006, page 3.

<sup>2</sup> The introductory section of the Mandate Letter for each and every Minister includes the following passage: “If we are to tackle the real challenges we face as a country – from a struggling middle class to the **threat of climate change** – Canadians need to have faith in their government’s honesty and willingness to listen. I expect that our work will be informed by performance measurement, evidence, and feedback from Canadians. We will direct our resources to those initiatives that are having the greatest, positive impact on the lives of Canadians, and that will allow us to meet our commitments to them. I expect you to report regularly on your progress toward fulfilling our commitments and to help develop effective measures that assess the impact of the organizations for which you are answerable.” [Emphasis added]

Learning for a Sustainable Future (LSF) has identified and reviewed a wide range of climate change classroom resources, children's literature books and videos which are available on LSF's Resources for Rethinking ([www.R4R.ca](http://www.R4R.ca)) database.

**WWW.R4R.CA** is a free online database which provides access to over a thousand excellent, peer-reviewed, curriculum-matched resources for educators from hundreds of publishers. These resources include lesson plans, activities, children's literature, and videos. Educators can search by language, jurisdiction, grade, subject, curriculum unit, and sustainability theme in order to get the perfect resource. About 6,600 teachers per month visit the R4R.ca website to access resources.



Learning for a Sustainable Future (LSF) is a Canadian charitable organization whose mission is to promote, through education, the knowledge, skills, values, perspectives, and practices essential to a sustainable future. LSF has been working with the federal and provincial governments, universities, business, educators and youth across Canada to support Climate Change and Sustainable Development Education since 1991. LSF's innovative programs and strategic partnerships are reshaping education policy and transforming learning methods, helping students learn to address the increasingly difficult economic, social, and environmental challenges of the 21<sup>st</sup> century.

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# Climate Change Resources for Teachers

Middle School

Secondary School

## A. Lesson / Unit Plans

Resource Title	Review	Synopsis	Curriculum Fit	
			Course	Unit
Electricity Conservation & You	<a href="http://www.resources4rethinking.ca/en/resource/electricity-conservation-and-you">http://www.resources4rethinking.ca/en/resource/electricity-conservation-and-you</a>	Students explore use and consequences of different renewable and non renewable sources of electricity. Subject content: renewable vs. non renewable energy, causes and consequences of climate change, greenhouse effect, action plan to reduce emissions.	Science & Technology 5 Science & Technology 6 Geography 7	Conservation of Energy & Resources Electricity & Electrical Devices  Natural Resources: Use & Sustainability
Arctic Survivor	<a href="http://www.resources4rethinking.ca/en/resource/arctic-survivor">http://www.resources4rethinking.ca/en/resource/arctic-survivor</a>	Outdoor activity to introduce students to the impacts of climate change on animal populations. Subject content: Habitats, limiting factors, population dynamics, climate change in Canada's north	Science & Technology 5 Science & Technology 6 Geography 7	Conservation of Energy & Resources Electricity & Electrical Devices Natural Resources: Use & Sustainability
Climate Challenge for 11 to 14 year olds	<a href="http://www.resources4rethinking.ca/en/resource/climate-challenge-for-11-to-14-year-olds">http://www.resources4rethinking.ca/en/resource/climate-challenge-for-11-to-14-year-olds</a>	Students explore the impacts of climate change on communities around the world and the steps being taken to address them. Subject content: Climate change causes & impacts on vulnerable communities, adaptation, action plans	Science & Technology 6 Social Studies 6	Biodiversity People and Environments
Ch Ch Ch Changes	<a href="http://resources4rethinking.ca/en/resource/ch-ch-ch-changes">http://resources4rethinking.ca/en/resource/ch-ch-ch-changes</a>	Challenges students to think about the effects of changing climate on sea ice in Canada's north and the related problems and challenges that result. Subject content: Climate impacts on northern life and culture. Graphing, Thermal expansion	Science & Technology 7 Geography 7 Science & Technology 8 Math 8 Geography 9: Issues in Canadian Geography Science 9 (Academic & Applied) Science 10 (Academic & Applied)	Interactions in the Environment Physical Patterns in a Changing World Water Systems Data Management  Interactions in the Physical Environment  Biology: Sustainable Ecosystems  Earth and Space Science- Earth's Climate
Corals and Chemistry	<a href="http://resources4rethinking.ca/en/resource/corals-and-chemistry">http://resources4rethinking.ca/en/resource/corals-and-chemistry</a>	Students explore the impacts of climate change on the oceans with particular attention to coral reefs. Subject content: carbon cycle, fossil fuels, ph, coral reef ecosystems	Science & Technology 7 Science & Technology 8 Science 9 (Academic & Applied) Science 10 (Academic & Applied) Science 10: Academic & Applied)	Interactions in the Environment Water Systems Biology: Sustainable Ecosystems  Chemistry: Chemical Reactions  Earth and Space Science- Earth's Climate
Heat Up Over Climate Change	<a href="http://r4r.ca/en/resource/hot-up-over-climate-change">http://r4r.ca/en/resource/hot-up-over-climate-change</a>	Explores the social, economic & environmental effects of climate change on children. <i>Subject content-</i> climate change cause	Social Studies 6 Geography 7	People & Environments Physical Patterns in a changing world

Resource Title	Review	Synopsis	Curriculum Fit	
			Course	Unit
		and effects, global connections, social justice		
Sow the Seed	<a href="http://www.resources4rethinking.ca/en/resource/sow-the-seed">http://www.resources4rethinking.ca/en/resource/sow-the-seed</a>	Examines the impact of climate change on agriculture. <i>Subject content</i> -plant growth, impacts of climate change around the world	Social Studies 6 Geography 7  Science & Technology 7	People & Environments Physical Patterns in a Changing World Interactions in the Environment
Climate Change: Connections & Solutions (6-8)	<a href="http://r4r.ca/en/resource/climate-change-connections-and-solutions-gr-6-8">http://r4r.ca/en/resource/climate-change-connections-and-solutions-gr-6-8</a>	Examines the economic, social and environment dimensions of CC. <i>Subject content</i> - Carbon cycle, greenhouse effect, energy sources, climate change	Science & Technology 6 Science & Technology 7  Math 6, 7 & 8 Social Studies 6	Electricity & Electrical Devices Interactions in the Environment  Data Management People & Environments
Climate Change: Creating Solutions for our Future	<a href="http://www.resources4rethinking.ca/en/resource/climate-change-creating-solutions-for-our-future">http://www.resources4rethinking.ca/en/resource/climate-change-creating-solutions-for-our-future</a>	Explores the past, present & future aspects of climate change. <i>Subject content</i> - greenhouse effect, CO2 emissions, weather & climate	Science & Technology 5 Science & Technology 6 Science & Technology 7 Geography 7  Science & Technology 8	Conservation of Energy Biodiversity Interactions in the Environment Physical patterns in a changing environment Systems in action
Sunny Schools Resources	<a href="http://resources4rethinking.ca/en/resource/sunny-school-resources">http://resources4rethinking.ca/en/resource/sunny-school-resources</a>	Multi activity resource that examines the climate change cause , effects around the world and the importance of investments in renewable energy	Science & Tech. 5 Science & Technology 6 Geography 7 Geography 9	Conservation-Energy & Res Electricity Natural resources & Sustainability Interactions- Physical
Real World Math	<a href="http://www.resources4rethinking.ca/en/resource/real-world-math-lessons-7-9-and-12">http://www.resources4rethinking.ca/en/resource/real-world-math-lessons-7-9-and-12</a>	Students use climate change examples to write, graph and solve inequalities. <i>Subject content</i> - solving inequalities, carbon footprint, greenhouse gases	Math 8	Measurement & number sense
Taking Our Temperature	<a href="http://resources4rethinking.ca/en/resource/taking-our-temperature-4-lesson-plans">http://resources4rethinking.ca/en/resource/taking-our-temperature-4-lesson-plans</a>	Examines health issues related to global warming. <i>Subject content</i> -water-borne pathogens, transmission of vector-borne diseases, greenhouse gas effects	Science & Technology 7 Science & Technology 8 Health & Physical Ed. 8 Issues in Canadian Geography 9 Science & Technology 10 (Academic & Applied)	Interactions in the Environ. Water Systems Healthy Living Interactions in the Physical Env.  Earth and Space Science
What's All The Buzz About  (Middle School links)	<a href="http://r4r.ca/en/resource/whats-all-the-buzz-about">http://r4r.ca/en/resource/whats-all-the-buzz-about</a>	How climate change effects disease transmission. <i>Subject content</i> – climate, Infectious disease – transmission & vectors, data collection & presentation	Geography 7  Math 7 & 8 Phys. Ed & Health 7 & 8 Geography 9	Physical Patterns in a Changing World Data Management & Prob. Healthy Living Interactions in the Physical Env.
Eneraction-Sustainable Transportation Lessons	<a href="http://resources4rethinking.ca/en/resource/eneraction-sustainable-transportation-lesson-package">http://resources4rethinking.ca/en/resource/eneraction-sustainable-transportation-lesson-package</a>	Students explore the environmental impacts of various methods of transportation. <i>Subject content</i> -Transportation, Greenhouse gases, Data collection, computation, case study analysis,	Math 5,6,7 Science & Tech 5 & 8 Science & Tech 7	Data Management, Numeracy Systems in Action Interactions in Ecosystems
Car Wars	<a href="http://resources4rethinking.ca/en/resource/car-wars">http://resources4rethinking.ca/en/resource/car-wars</a>	In a board game format students explore sources/consequences of increasing carbon dioxide in the atmosphere	Science 7 Science 8 Science 9 (Applied) Technological Ed 9	Interactions in the Environment Systems in Action Sustainable Ecosystems Tech, Environment & Society
Energy: Making Sustainable Choices	<a href="http://resources4rethinking.ca/en/resource/energy-making-sustainable-choices">http://resources4rethinking.ca/en/resource/energy-making-sustainable-choices</a>	Decision-making approach to exploring sustainable energy choices in a Canadian context.	Science 10: Academic & Applied)	Earth and Space Science- Earth's Climate

Resource Title	Review	Synopsis	Curriculum Fit	
			Course	Unit
		Subject content: Energy sources & choices, energy supply & demand, energy use & climate change, fracking, oil sands, pipelines, renewable energy.	Chemistry 11 Environmental Science 11 (Univ./College Prep) Regional Geography 11 Chemistry 12 (College Prep) Environment & Resource Management 12	Gases & Atmospheric Chemistry Conservation of Energy & Environmental Challenges Sustainability & Stewardship Chemistry in the Environment Sustainability and Stewardship of Natural Resources
Climate Change Controversy	<a href="http://resources4rethinking.ca/en/resource/climate-change-controversy-student-inquiry">http://resources4rethinking.ca/en/resource/climate-change-controversy-student-inquiry</a>	Students learn the skills associated with the inquiry process-asking questions, evaluating information sources, reading and viewing critically, working with others, sharing, discussing and possibly debating issues -in exploring climate change. Subject content: IPCC, climate change evidence, climate skeptics,	Civic Studies 10 Science 10 (Academic & Applied) Environmental Science 11 (Univ/College Prep) Environmental Science 11 (Workplace Prep)	Civics & Citizenship- Civic Engagement Earth & Space Science- Climate  Scientific solutions to Environmental Challenges  Human Impact on the Environment
After Fukushima	<a href="http://resources4rethinking.ca/en/resource/after-fukushima-we-should-abandon-nuclear-power">http://resources4rethinking.ca/en/resource/after-fukushima-we-should-abandon-nuclear-power</a>	Students explore the question- 'should the disaster at Fukushima and others like it force us to take a step back & consider whether such a potentially dangerous energy source is worth the risk for the clean energy it provides. Subject Content: meeting energy demands, the pros & cons of nuclear power, climate change	Science 10 (Academic & App) Environmental Science 11 (Workplace Prep) Environmental Science 11 (Univ/College Prep) Physics 11 Physics 12	Earth and Space Science- Earth's Climate  Human Impact on the Environment  Conservation of Energy & Solutions to Contemporary Challenges Energy & Society  Energy Transformations
Getting to the Core	<a href="http://resources4rethinking.ca/en/resource/getting-to-the-core">http://resources4rethinking.ca/en/resource/getting-to-the-core</a>	Students analyze and graph ice core data to explore the link between atmospheric temperature and carbon dioxide. Subject content: Greenhouse effect, climate change, carbon cycle, graphing	Math 9 (Academic & Applied) Science 9 (Applied) Science 10. Academic & Applied Environmental Science 11 (Univ. & College Prep) Environmental Science 11 (Workplace Prep)	Linear Relations  Biology- Sustainable Ecosystems  Earth & Space-Climate  Solutions to Contemporary Problems Human Impact
Making The Decision About the Construction of an Oil Pipeline Through BC	<a href="http://resources4rethinking.ca/en/resource/making-the-decision-about-the-construction-of-an-oil">http://resources4rethinking.ca/en/resource/making-the-decision-about-the-construction-of-an-oil</a>	Students analyze a real-world environmental issue involving the building of a pipeline through the province of British Columbia. Subject content: pros & cons of pipelines, First Nations perspectives, critical analysis, sustainable development	Aboriginal Beliefs, Values & Aspirations 11 (Univ & College Prep) Environmental Science 11 (Workplace) Regional Geography 11 (Univ. & College Prep)	Challenges  Human Impact  Sustainability and Stewardship  Methods of Geographic Inquiry & Sustainability and Stewardship

Resource Title	Review	Synopsis	Curriculum Fit	
			Course	Unit
			Environment & Resource Mgt 12 (Univ. & College Prep)  Living in a Sustainable World 12	Sustainability of Natural Resources & Ecosystems & Human Activity
Climate Change in Photos	<a href="http://resources4rethinking.ca/en/resource/-climate-change-in-photos">http://resources4rethinking.ca/en/resource/-climate-change-in-photos</a>	Students analyze and discuss photos to learn about the impact of climate change. Subject Content: Climate Change impacts and responses around the world, climate justice	Environmental Science 11 (Workplace) Regional Geography 11 Living in a Sustainable World 12  Forces of Nature: Physical Processes 11 The Environment & Resource Mgt. 12 (Workplace)	Human Impact  Sustainability & Stewardship Sustainability of Natural Resources & Ecosystems & Human Activity Sustainability and Stewardship  Human-Environment Interactions
Climate Change, Children and Youth	<a href="http://www.resources4rethinking.ca/en/resource/climate-change-childrens-rights">http://www.resources4rethinking.ca/en/resource/climate-change-childrens-rights</a>	The resource features activities and support documents that address six interconnected themes as presented in the UNICEF UK's Climate Change Report 2008: Our climate, our children, our responsibility. Subject Content: climate change, developing world, food security, water, energy, sustainability	Science 9  Environmental Science 11 (Univ. & College Prep)  Environmental Science 11 (Workplace Prep)  Regional Geography 11  Living in A Sustainable World 12	Sustainable ecosystems & human activity Human Health & the Envir. & Sustainable Agriculture & Conservation of Energy Human Health and the Environment & Human Impact  Dynamics and Change  Sustainability and Natural Resources
Connections to Climate Change in Grade 11 and 12 Science	<a href="http://www.resources4rethinking.ca/en/resource/connections-to-climate-change-in-science-in-grade-11">http://www.resources4rethinking.ca/en/resource/connections-to-climate-change-in-science-in-grade-11</a>	Resource provides climate & energy activities connected to outcomes in Biology, Chemistry & Physics. Specific topics include ocean acidification, bio-energy & energy transformation	Biology 11 Chemistry 11  Physics 11  Environmental Science 11 (Workplace)	Microbiology Gases & atmospheric chem. & Hydrocarbons & energy Energy & society Scientific Solutions Human impact on the Environ.
Melting Ice	<a href="http://r4r.ca/en/resource/melting-ice">http://r4r.ca/en/resource/melting-ice</a>	Examines the global causes and effects of melting ice. <i>Subject content</i> -global warming, sea level rise, Aboriginal perspectives, interconnectedness	Science 10. Academic & Applied  Environmental Science 11 (Workplace Prep) Forces of Nature 11  Living in a Sustainable World 12	Earth & Space-Climate  Human Impact on the Environ.  The Physical Environment: Sustainability & Stewardship  Ecosystems & Human Activity
Climate Change: Connections & Solutions (9-12)	<a href="http://r4r.ca/en/resource/climate-change-connections-solutions-gr-9-12">http://r4r.ca/en/resource/climate-change-connections-solutions-gr-9-12</a>	Examines the economic, social and environment dimensions of CC. <i>Subject content</i> - Carbon cycle, greenhouse effect, energy sources, climate change	Issues in Can. Geography 9 (Academic & Applied) Science 9  Science 10 (Academic & Applied)  Environmental Science 11 (Workplace Prep)	Interactions in the Environment  Sustainable Ecosystems &  Earth & Space-Climate  Human Impact on the Environ.  Conservation of Energy &

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			Environmental Science 11 (Univ./College Prep)	Solutions to Contemporary challenges
My 2050 Tool Kit	<a href="http://r4r.ca/en/resource/my-2050-schools-toolkit">http://r4r.ca/en/resource/my-2050-schools-toolkit</a>	How to reduce carbon emissions & maintain a secure energy supply. <i>Subject content</i> -Climate change, greenhouse gases, energy sources -supply and demand	Issues in Can. Geography 9 (Academic & Applied)  Science 10 (Academic & Applied) Civics Studies 10  Environmental Science 11 (Univ./College Prep)  Regional Geography 11  The Env. & Resource Mgt. 12	Inter actions in the environment & Managing Canada's resources  Earth & Space Science: Climate  Active citizenship  Conservation of Energy & Solutions to Contemporary Env. Challenges  Dynamics of change  Sustainability & Stewardship
What's All The Buzz About	<a href="http://r4r.ca/en/resource/whats-all-the-buzz-about">http://r4r.ca/en/resource/whats-all-the-buzz-about</a>	How climate change effects disease transmission. <i>Subject content</i> – climate, Infectious disease – transmission & vectors:	Environmental Science 11 (Univ./College & Workplace Prep) Regional Geography 11 Health for Life 11  Science 12: College/Workplace	Human Health & the Environment  Dynamics of Change Community Health  Pathogens & Disease, Disease & its prevention
The Buffer Zone: Acid Base Chemistry in the World's Oceans	<a href="http://r4r.ca/en/resource/the-buffer-zone-acid-base-chemistry-in-the-worlds">http://r4r.ca/en/resource/the-buffer-zone-acid-base-chemistry-in-the-worlds</a>	How global warming effects marine environments: <i>Subject content</i> - acid- base theory, buffers	Science 9  Science 10  Chemistry 11 Chemistry 12: College Prep	Biology: sustainable ecosystems  Chemistry: Chemical Reactions  Solutions & Solubility Chemistry in the Environment
A Teacher's Guide for the Video Sila Alangotok - Inuit Observations on Climate Change	<a href="http://www.resources4rethinking.ca/en/resource/a-teachers-guide-for-the-video-sila-alangotok-inuit">http://www.resources4rethinking.ca/en/resource/a-teachers-guide-for-the-video-sila-alangotok-inuit</a>	Explores economic, social and environmental impacts of climate change in Canada's North. <i>Subject content</i> -TEK, Aboriginal society, greenhouse gases, climate	Issues in Can. Geography 9 Science 9 (Academic & Applied) Science 10 (Academic & Applied)  Aboriginal Studies 10 Aboriginal Beliefs in Contemp. Society 11	Interactions in the physical Env.  Sustainable ecosystems  Earth & Space -Climate  Challenges Relationships.
Penguins on Thin Ice	<a href="http://www.resources4rethinking.ca/en/resource/penguins-on-thin-ice">http://www.resources4rethinking.ca/en/resource/penguins-on-thin-ice</a>	Provides materials for musical production dealing with climate change. <i>Subject content</i> - musical, dramatic and visual arts composition & presentation	Integrated Arts 9 Visual Arts 10, 11 Music 9, 10, 11 Drama 9, 10, 11	Creating & Performing Foundations
Local Connections to Global Issues: Health	<a href="http://resources4rethinking.ca/en/resource/local-connections-to-global-issues-health">http://resources4rethinking.ca/en/resource/local-connections-to-global-issues-health</a>	Includes activities that bring to life current child health issues and how the spread of infectious disease is being impacted by changing climate. <i>Subject Content</i> - Climate change, human health, infectious disease, global citizenship	Science (Applied) 10 Environ. Science 11 (Workplace)  Health Education 11 Social Studies 11  Science 12	Earth & Space Science: Climate Human Health & the Environ.  Health for life Equity, Diversity & Social Justice  Science & Public Health Disease & its Prevention
Tread Lightly: Low Carbon Lunch	<a href="http://www.resources4rethinking.ca/en/resource/tread-lightly-low-carbon-lunch">http://www.resources4rethinking.ca/en/resource/tread-lightly-low-carbon-lunch</a>	Students examine the relationship between food choices & climate change and	Family Studies 9 & 10 Science 10	Food & Nutrition Earth & Space Science- Climate Human Impact on the Environ.



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		take action to reduce their carbon footprint. <i>Subject content</i> -carbon footprint, local food, healthy food, waste reduction	Environmental Science 11 (Workplace) Living in A Sustainable World 12	Ecosystems & Human Activity
Serious Game	<a href="http://www.resources4rethinking.ca/en/resource/serious-game">http://www.resources4rethinking.ca/en/resource/serious-game</a>	In this simulation students are tasked to develop a strategy for reducing consumption of energy, increasing energy efficiency and choosing the best renewable energies. <i>Subject content</i> - energy conservation, renewable energy, sustainable development	Issues in Can. Geography 9 Environ. Science 11 (Univ./College Prep) Environ. Science 11 (Workplace) Environment & Resource Mgt.12 (Univ./College) Environment & Resource Mgt.12 (Workplace)	Livable communities Conservation of Energy Human Impact Sustainability & Stewardship Global Connections
The Big Picture On Climate Change and Biodiversity	<a href="http://resources4rethinking.ca/en/resource/the-big-picture-on-biodiversity-and-climate-change">http://resources4rethinking.ca/en/resource/the-big-picture-on-biodiversity-and-climate-change</a>	Students explore the relationship among climate change, biodiversity and human health. Resource includes a video component, simulation, outdoor activities & an action component.	Science 9 (Academic & Applied) Issues in Can. Geography 9 Science 10 (Academic & Applied)	Sustainable Ecosystems Interactions: Physical Env. Earth & Space Science: Climate
Chemistry Innovations in Sustainable Development	<a href="http://www.resources4rethinking.ca/en/resource/chemistry-innovations-in-sustainable-development">http://www.resources4rethinking.ca/en/resource/chemistry-innovations-in-sustainable-development</a>	Chemistry resource includes activities on greenhouse gases and climate change	Science 10 (Academic) Chemistry 11 Chemistry 12	Earth, Space –climate change Hydrocarbons & Energy Gases & Atmospheric Chem Chemistry in the Environment
Natural Gas. A Cleaner Energy Solution or Just Another Fossil Fuel	<a href="http://www.resources4rethinking.ca/en/resource/natural-gas-a-cleaner-energy-solution-or-just-another">http://www.resources4rethinking.ca/en/resource/natural-gas-a-cleaner-energy-solution-or-just-another</a>	Students gather information on natural gas, compare its emissions to those of other fossil fuels and use systems-based analysis to defend their position	Issues in Can. Geography 9 Chemistry 11 Env. Science 11	Interactions-Physical Env. Managing Canada’s resources Hydrocarbons and Energy Conservation of Energy
Sustainability and Really Cool Technologies	<a href="http://www.resources4rethinking.ca/en/resource/sustainability-and-really-cool-technologiesenergy">http://www.resources4rethinking.ca/en/resource/sustainability-and-really-cool-technologiesenergy</a>	Activities include an examination of our reliance on fossil fuels, peak oil and reducing our dependence	Issues in Can. Geography 9 Science & Technology 9 Science 10 Env. Science 11 Living in a Sustainable World 12	Interactions-Physical Env. Electricity Earth & Space- Climate Solutions to Challenges Conservation of Energy Sustainability of Natural Resources
Understanding Climate Change in Grade 11 & 12 Geography	<a href="http://resources4rethinking.ca/en/resource/understanding-climate-change-in-grade-11-and-12-geography">http://resources4rethinking.ca/en/resource/understanding-climate-change-in-grade-11-and-12-geography</a>	This resource provides information and inquiry-based activities concerning climate change.	Regional Geography 11 Environ. & Resource Mgt. 12 (Univ./College) Environ. & Resource Mgt. 12 (Workplace)	Dynamics and Change Sustainability & Stewardship Sustainability & Stewardship Human-Environment Interactions
Connecting Climate Change Through Rich Performance Tasks in Grade 10 Science	<a href="http://resources4rethinking.ca/en/resource/connecting-to-climate-change-through-rich-performance">http://resources4rethinking.ca/en/resource/connecting-to-climate-change-through-rich-performance</a>	Another inquiry based approach to the study of climate change. Includes a look at the chemistry of climate change and an option of 2 culminating tasks	Science 10 (Academic & Applied)	Earth & Space-Climate -Human Impact
Climate Change, Poverty and Women	<a href="http://resources4rethinking.ca/en/resource/climate-change-poverty-and-women">http://resources4rethinking.ca/en/resource/climate-change-poverty-and-women</a>	Examines climate change as a human crisis through activities that focus on how the most vulnerable are being affected	Social Studies 11 Social Studies 12	Equity, diversity, social justice Global social challenges

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The Heat is On	<a href="http://www.resources4rethinking.ca/en/resource/the-heat-is-on-cause-and-effect-and-climate-change">http://www.resources4rethinking.ca/en/resource/the-heat-is-on-cause-and-effect-and-climate-change</a>	Examines correlation & causation within the context of climate change. Specific attention to impacts of human activity on climate	Science & Tech. 7 Science 10 (Academic & Applied) Environmental Science 11 (Univ. & Workplace)	Heat and the Environment Earth & Space Science: Climate Conservation of energy
Moving Oil	<a href="http://www.resources4rethinking.ca/en/resource/moving-oil-case-study">http://www.resources4rethinking.ca/en/resource/moving-oil-case-study</a>	In this case study approach, students examine the different ways oil is transferred from place to place and consequence of each	Issues in Canadian Geography 9 Environmental Science 11 (Univ/College) Environmental Science 11 Regional Geography 11 Technological Ed. 11 & 12	Managing Canada's Resources Solutions to Challenges Human Impact on the Environ. Sustainability & Stewardship Technology, Environment & Society
Weather Makers	<a href="http://resources4rethinking.ca/en/resource/weather-makers-secondary">http://resources4rethinking.ca/en/resource/weather-makers-secondary</a>	This comprehensive, 15-lesson unit addresses climate science, climate change causes & consequences and encourages students to act on their learning	Science 7 Science 8 Science 9 (Academic & Applied) Science 10 (Academic & Applied)	Heat in the Environment Water Systems Biology: Sustainable Ecosystems Earth & Space Science: Climate Chemistry: Chemical Reactions
Climate Change & the Arctic	<a href="http://resources4rethinking.ca/en/resource/climate-change-and-the-arctic">http://resources4rethinking.ca/en/resource/climate-change-and-the-arctic</a>	Students identify patterns and trends in Arctic sea ice using maps and satellite imagery then make predictions about the extent and impact of future changes in the Arctic.	Issues in Canadian Geog. 9 (Academic & Applied) Science 9 (Applied) English 10 Science 10 (Applied) Environmental Science 11 (Workplace) Regional Geography 11	Geographic Inquiry Biology: Sustainable Ecosystems Media Studies Earth And Space Science: Climate Human Impact on the Environ. Dynamics and Change Sustainability and Stewardship

### B. Short Videos

Resource Title	Review	Synopsis	Curriculum Fit	
			Course	Unit
Unlimited Renewable Energy in the 21 <sup>st</sup> Century	<a href="http://www.resources4rethinking.ca/en/resource/unlimited-renewable-energy-in-the-21st-century">http://www.resources4rethinking.ca/en/resource/unlimited-renewable-energy-in-the-21st-century</a>	A documentary in which a group of passionate grade six students call on adults to take action to address global warming	Sci & Technology 5 Sci & Technology 6 Geography 7	Conservation of Energy & Resources Electricity & Electrical Devices Natural Resources: Use & Sustainability
Oil Sands Field Trips	<a href="http://www.resources4rethinking.ca/en/resource/oil-sands-field-trips">http://www.resources4rethinking.ca/en/resource/oil-sands-field-trips</a>	This four-part series takes viewers on video field trips to the Alberta oil sands. Students learn what oil sand is, why it is important, how it is taken out of the ground and the challenges involved.	Geography 7 Science & Technology 7 Issues in Canadian Geography 9 (Academic & Applied)	Natural Resources: Use & Sustainability Interactions in the Environment Interactions in the Physical Environment

Resource Title	Review	Synopsis	Curriculum Fit	
			Course	Unit
Kids vs Global Warming	<a href="http://www.resources4rethinking.ca/en/resources/kids-vs-global-warming">http://www.resources4rethinking.ca/en/resources/kids-vs-global-warming</a>	Introduces a remarkable young teenager who crusades against global warming	Social Studies 6 Geography 7	People and Environments Natural Resources...Use & Sustainability
This Bulb	<a href="http://video.nationalgeographic.com/video/this-bulb-ngv">http://video.nationalgeographic.com/video/this-bulb-ngv</a>	Natalie Portman, Kyra Sedgwick and Chloe Sevigny explain how small changes in lifestyle can help reduce greenhouse gas emissions.	Science 5 Science 6 Social Studies 6 Geography 7	Conservation of Energy Electricity and Electrical Devices People and Environments Natural Resources...Use & Sustainability
Climate Change, Wildlife and Wetlands	<a href="http://resources4rethinking.ca/en/resource/climate-change-wildlife-wetlands">http://resources4rethinking.ca/en/resource/climate-change-wildlife-wetlands</a>	Impact of CC on Wildlife. Challenges students to "go outside" and examine how nature is changing. Students are also encouraged to adopt lifestyle choices and actions to help make a difference	Science & Technology 6 Social Studies 6 Science & Technology 7 Science 9 (Academic & Applied) Science 10 (Academic & Applied)	Biodiversity People and Environments Interactions Sustainable Ecosystems  Earth & Space: Climate
Global Warming: It's All About the Carbon	<a href="http://www.resources4rethinking.ca/en/resources/global-warming-its-all-about-carbon">http://www.resources4rethinking.ca/en/resources/global-warming-its-all-about-carbon</a>	The 5 part video package delivers entertaining chemistry lesson on the behavior of the carbon atom and its role in global warming	Science 10 (Academic & Applied) Chemistry 11 Environmental Science 11 (Workplace Prep)	Earth and Space- Climate  Hydrocarbons and Energy Human Impact on the Environment
Can Animals Adapt to Climate Change	<a href="http://www.resources4rethinking.ca/en/resources/can-wildlife-adapt-to-climate-change">http://www.resources4rethinking.ca/en/resources/can-wildlife-adapt-to-climate-change</a>	This TedEd Talk examines how plants and animals are adapting to our changing climate	Biology 11 (Univ. Prep) World Issues: A Geographic Analysis 12	Evolution Sustainability & Stewardship
Climate Change 101 with Bill Nye	<a href="http://www.resources4rethinking.ca/en/resources/climate-change-101-with-bill-nye">http://www.resources4rethinking.ca/en/resources/climate-change-101-with-bill-nye</a>	Bill Nye explains what causes climate change, how it affects our planet, why we need to act promptly to mitigate its effects, and how each of us can contribute to a solution.	Issues in Can. Geography 9  Science 9 (Academic & Applied) Exploring Technologies 9 (Open) Science 10. Academic & Applied	Interactions in the Physical Environment Sustainable Ecosystems  Technology, the Environment & Society Earth and Space- Climate
Chasing Ice	<a href="http://www.resources4rethinking.ca/en/resources/chasing-ice">http://www.resources4rethinking.ca/en/resources/chasing-ice</a>	Graphic illustration of the melting of arctic ice	Issues in Can. Geography 9 Science 10 Regional Geography 11 Living in a Sustainable World 12 Env. & Resource Mgt.12 (workplace)	Interactions in the Physical Env. Earth & Space Science- Climate Dynamics and Change Ecosystems & Human Activity  Human-Environment Interactions
300 Years of Fossil Fuels	<a href="http://www.resources4rethinking.ca/en/resources/three-hundred-years-of-fossil-fuels-in-three-hundred">http://www.resources4rethinking.ca/en/resources/three-hundred-years-of-fossil-fuels-in-three-hundred</a>	Traces our dependence on fossil fuels, the consequences and solutions	Environ. Science 11 (Univ. /College & Workplace)  Forces of Nature 11 Media Studies 11 Living in a Sustainable World Environment & Resource Mgt.12	Energy conservation, Contemporary challenges, Human impact  The Physical Environment Media & Society Sustainability of Natural Resources  Ecological Systems
Global Warming: A Way Forward	<a href="http://www.resources4rethinking.ca/en/resources/global-warming-a-way-forward">http://www.resources4rethinking.ca/en/resources/global-warming-a-way-forward</a>	Images used to illustrate consequences of climate change and the future scenarios that are possible	Issues in Can. Geography 9  Environmental Science 11	Interactions in the Physical Env. & Managing Canada's Resources

Resource Title	Review	Synopsis	Curriculum Fit	
			Course	Unit
			Regional Geography 11 Living in a Sustainable World 12 Environment & Resource Mgt.12	Solutions to Contemporary Challenges, Human impact on the environment Dynamics and change Ecosystems & Human Activity Global Connections, Human-Environment Interactions
How to Feed the World in 2050	<a href="http://www.resources4rethinking.ca/en/resource/how-to-feed-the-world-in-2050">http://www.resources4rethinking.ca/en/resource/how-to-feed-the-world-in-2050</a>	Examines the relationship between climate change and sustainable agriculture	Family Studies 10 Environmental Science 11  Health for Life 11  Environment & Resource Mgt.12	Food & Nutrition Human Health & the Environment, Sustainable Agriculture, Human Impact Determinants of Health  Human-Environment Interactions, Global Connections
Climate Change-Planet Ocean	<a href="http://www.resources4rethinking.ca/en/resource/climate-change-1">http://www.resources4rethinking.ca/en/resource/climate-change-1</a>	Provides a compelling look at the effects of changing climate in the far north	Science 9 (Academic & Applied) Science 10 (Academic & Applied) Environ. Science 11 (Univ./College & Workplace)  Regional Geography 11	Sustainable Ecosystems  Earth & Space- Climate  Solutions to Enviro. Challenges Human Impacts on the Enviro.  Dynamics & Change
Biodiversity & Climate Change	<a href="http://resources4rethinking.ca/en/resource/-biodiversity-and-climate-change">http://resources4rethinking.ca/en/resource/-biodiversity-and-climate-change</a>	Examines cause and effect relationship between climate change and biodiversity	Science 10 (Academic & Applied) Env. Science 11  Regional Geography 11 Living in a Sustainable World 12	Earth & Space- Climate  Solutions to Enviro. Challenges Human Impacts on the Environment Dynamics & Change Ecosystems & Human Activity
Inuit Observations on Climate Change	<a href="http://resources4rethinking.ca/en/resource/-5">http://resources4rethinking.ca/en/resource/-5</a>	The video documents climate change in Canada's north from an Inuit perspective	Issues in Canadian Geography 9 (Aca& Appl.) Science 9 (Aca & Appl) Aboriginal Studies 10 Science 10 (Aca & Appl) Env. Science 11  Regional Geography 11 Aboriginal Beliefs in Contemporary Society 11 Living in a Sustainable World 12	Interactions in the physical env.  Sustainable Ecosystems Aboriginal Peoples in Canada Earth & Space-climate Solutions to contemporary challenge Human impact on the Environment Dynamics and change Relationships Ecosystems & Human Activity
My Cheeseburger Footprint	<a href="http://resources4rethinking.ca/en/resource/my-cheeseburger-footprint">http://resources4rethinking.ca/en/resource/my-cheeseburger-footprint</a>	Tracks the amount of CO <sub>2</sub> emitted from the production of a cheeseburger, then extrapolates the larger impact of fast food on greenhouse gas emissions.	Science & Technology 7 Issues in Canadian Geography 9 Science 10 Env. Science 11  Living in a Sustainable World 12	Interactions in the Environment  Interactions in the physical env. Earth & Space-climate Solutions to contemporary challenges Human Impact on the Environment. Ecosystems and Human Activity
When a Town Runs Dry	<a href="http://www.resources4rethinking.ca/en/resource/when-a-town-runs-dry">http://www.resources4rethinking.ca/en/resource/when-a-town-runs-dry</a>	Documents the effects of severe drought on lives of those living in a small farming community	Science 10 (Academic & Applied) Environmental Science 11 (Univ./College)	Earth & Space Science: Climate  Sustainable Agriculture

Resource Title	Review	Synopsis	Curriculum Fit	
			Course	Unit
			Environmental Science 11 (Workplace) Forces of Nature & Regional Geography 11 Living in A Sustainable World 12 The Environment & Resource Mgt. World Issues 12 (Univ. & College)	Human Impact on the Environment Sustainability & Stewardship Sustainability of Natural Resources Human-Env. Interactions Sustainability & Stewardship
What's the Deal with Fossil Fuels	<a href="http://www.resources4rethinking.ca/en/resource/whats-the-deal-with-fossil-fuels">http://www.resources4rethinking.ca/en/resource/whats-the-deal-with-fossil-fuels</a>	Fossil fuels. What they are. Why they are a problem. Steps for reducing reliance	Geography 7 Issues in Canadian Geog. 9 (Academic & Applied) Science 9 & 10	Natural Resources: Use & Sustainability Managing Canada's Resources & Industries Chemistry & Earth & Space Science: Climate

### C. Children's Books/Novels

Resource Title	Review	Synopsis	Curriculum Fit	
			Grades	Subjects
How We Know What We Know About Our Changing Climate	<a href="http://resources4rethinking.ca/en/resource/how-we-know-what-we-know-about-our-changing-climate">http://resources4rethinking.ca/en/resource/how-we-know-what-we-know-about-our-changing-climate</a>	Introduces young people to current climate change research. Emphasis is placed on the importance of citizen science	Grades 5 - 8	Science, Geography, Geography
Judy Moody Saves the World	<a href="http://www.resources4rethinking.ca/en/resource/judy-moody-saves-the-world">http://www.resources4rethinking.ca/en/resource/judy-moody-saves-the-world</a>	Judy Moody wonders how one person can "heal the world". The story chronicles her personal efforts.	Grades 3 and 4	Literacy, Language Arts, Science
Empty	<a href="http://resources4rethinking.ca/en/resource/empty">http://resources4rethinking.ca/en/resource/empty</a>	Exciting drama that offers a glimpse of what our world might look with a continued reliance on fossil fuels	Grades 6-9	Literacy, Science, Geography
Siberia	<a href="http://www.resources4rethinking.ca/en/resource/siberia">http://www.resources4rethinking.ca/en/resource/siberia</a>	The novel describes a world of the future where climate change and habitat destruction have ravaged the Earth. Rosita and Mama struggle to eke out an existence in their bleak environment.	Grades 5-8	Literacy, Language Arts, Science & Social Studies
Ship Breaker	<a href="http://www.resources4rethinking.ca/en/resource/ship-breaker">http://www.resources4rethinking.ca/en/resource/ship-breaker</a>	Many problems resulting from climate change are exposed in this suspense novel based on salvage practice known as 'ship breaking'	Grades 9-11	Literacy, Language Arts, Science & Social Studies