

Unit Plan: Coal – An American Value?

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Description:

Skagit County students are noticing posters, hearing concerts, watching YouTube videos, and seeing their parents attend meetings about coal and its connections to Washington State and China. This lesson brings together the layers of information about coal to students so that they can better understand the controversy, individual issues and make their own civic decisions in future. As Professor David Rossiter (Huxley College of the Environment, Western Washington University) stated at a professional development workshop on 27 June 2013, we all need to go beyond environmental and economic issues to reach an understanding that coal issues involve “*relations among people, place, and power.*”

Grade Level(s):

Grades 9–12.

Subject(s):

Recommended for World Languages, Current World Problems, Social Studies, and Economics classrooms (though the content can be integrated into any area of study at the high school level). This unit was studied, for example, in my World Languages (French/Spanish) classes.

Duration:

This unit may take as long as two weeks, depending on the demands of other curriculum.

Goal:

The goal is to explore values, increase student awareness of local issues, encourage civic engagement and active observations of public media (posters, paid and unpaid newspaper announcements, television, cinema), technology (YouTube films, newspaper archives), primary sources, news magazine reports, parental opinions, “expert” opinions, in order to form a balanced local and global understanding of coal and its impact on the economy, environment, society, health, and international relations.

Objectives:

Students will actively participate in many, if not all, of the activities below:

- Read, talk, and reflect on coal as a means of power generation.
- Ask questions of their parents, grandparents, and others in the community about their experience with coal as a job source, a heating source, and as a power source.
- Write to pen pals in northeastern France (Lorraine province). Ask French teenagers from a coal mining area about Emile Zola’s book *Germinal* and the coal mines of the early twentieth century. [Most students in France have had that novel as required reading in secondary school or have seen the 1993 film *Germinal* [directed by Claude Berri.]
- Investigate China and the other Asian countries which have requested to purchase coal from North American (US and Canada) sources, in particular, from the Powder River Basin, near Gillette, Wyoming. Have the use of coal and the price of coal in China increased or decreased in the last two decades in those Asian countries?
- Research the cultural impact of coal exports on tribal lands, particularly the Lummi Tribal Nation north of Bellingham, WA.
- Research the future impact of coal exports on farmers and ranchers between Wyoming and Washington State.
- Research the future impact on marine life in the Pacific Ocean and surrounding lakes, rivers, streams. Compare and contrast the salmon, herring, Orca whale populations of the Pacific now with four decades ago.
- Research the potential impact on health: Organic farms, respiratory illnesses, food, air, hospital services.
- Research the impact on emergency services. Coal trains [eighteen per day] could delay sheriff vehicles, ambulances, fire services handling emergencies in the 122 communities between Gillette, WY and Cherry Point.

- Research the employment impact of coal exports. Will jobs be created? Will jobs require skills? Will the local area be able to provide workers? Will out-of-area workers be needed to fill the jobs? Will the jobs be long-lasting?
- Distinguish between open pit mining [Gillette, WY] and underground mining [Kentucky, for example]. Compare and contrast the life span of workers, the diseases associated with the work, and the pay scales.
- Contrast the point of view of the labor unions in coal exports to that of environmentalists (Sierra Club, for example).
- Visit with representatives of the Lummi Nation and visit the Cherry Point “*unimproved*” beach site in question (potentially the nation’s largest coal port).
- Write to Washington State and US members of the Senate and House of Representatives to ask them for their point of view on establishing a coal port at Cherry Point or in Longview, WA. Some have taken a stand.
- Write to local Skagit and Whatcom County city council persons and county commissioners asking for their point of view on a coal port for Northwest Washington. Do this before and after the elections of November 2013.
- Compare and contrast the size of a Washington State ferry to the enormous super tankers that will be constructed to transport coal from the Pacific Coast to Asia, and then compare them to the size of an Orca whale.
- Analyze the phrase: “Is it an accident?” as it relates to an oil spill near the coast of Western Washington, a derailed coal train in Pasco, WA, the large tanker that split in two off the coast of South Africa, the clouds of black smog near the West Chore port in Delta, British Columbia in April 2013, the breakdown of a train in Mount Vernon in 2013, delaying cross-city traffic for an hour. All were immediately labeled “*a rare accident*” when reported.
- Analyze the role the coal trains and coal port have in the elections in Whatcom and Skagit counties in November 2013.
- Develop a schedule of the trains which cross Skagit County, the time it takes for the train to clear an intersection, the length of the train [how many cars?], and the contents [passengers, oil, coal, grain, lumber?]
- Count and compare the number of pro-coal and anti-coal advertisements in the Skagit Valley *Herald* and the Bellingham *Herald*.
- Investigate the recent repairs to roads near the Fraser Docks in Surrey, BC, railroad crossings on Kincaid Street in downtown Mount Vernon in mid-October 2013, as well as the generous donation by BSNF to the Skagit County Boys and Girls Club for the recent rebuilding of the closed center.

Standards:

This lesson meets the following national standards in World Languages: Compare, contrast opposing points of view. Analyze personal opinions and contrast with that of “experts.” Assess bias in information in the media.

Background Information:

The coal train issue has both negative and positive implications for everyone in the region. I personally live within 1 mile of railroad tracks that could potentially impede emergency vehicles. Ninety per cent of Washington’s population lives within ten miles of rail traffic. In June 2013, I decided to follow the route of coal trains between Burlington, WA and Gillette, WY (my birthplace) with a colleague to bear witness to regions and communities directly impacted by coal and I learned a lot. We drove from six to nine hours daily. I interviewed the fire chief of the Gillette, WY fire department. We visited the open pit mining areas in an organized tour and took approximately 140 photos. Following the trip, I participated in a professional development workshop for K-12 teachers offered by Western Washington University’s Center for Canadian-American Studies. It was called “From Coal Trains to Classrooms: Cross-border Trade, Energy and Environmental Issues in the Pacific Northwest”. It addressed some key questions: *What are the real-world implications of shipping coal through ports in Washington? How will re-negotiation of the Columbia River Treaty affect salmon, flood control, and electricity supplies in Cascadia? Why are Alberta oil sands and expanded Northwest pipelines important issues for Washington State?* My experiences and information learned are integrated in this unit.

Primary Source Documents/Resources:

- Photos by Bellingham professional photographer, Paul Anderson [<http://www.paulkanderson.com>]. Click on “Coal and the American West” for 35 outstanding aerial photos of the open pit mines in the West, [paulinbham@me.com]
- www.SeattleTimes.org - Coverage of King County scoping hearing.
- www.goskagit.com - *Skagit Valley Herald* coverage of scoping hearing in November 2012.
- www.BellinghamHerald.com - Coverage of Whatcom County scoping hearing in October 2012 and paid Gateway Pacific full page flyers added to newspaper (three times).
- www.realclimate.org - Voters Taking Action on Climate Change (in lower British Columbia)
- State committee **C.L.E.W.** with Washington Governor Inslee and Representative Ranker working on reducing greenhouse gases in the state. They are seeking public input on climate change.

- The Climate Legislative and Executive Workgroup was created under Engrossed Second Substitute Senate Bill 5802 (E2SSB 5802) during the 2013 Regular Session. The Workgroup is charged with recommending a state program of actions and policies to reduce greenhouse gas (GHG) emissions, that if implemented would ensure achievement of the state's emissions reductions limits set in Chapter 70.235 by the 2008 legislature.
- Engrossed Second Substitute Senate Bill 5802 requires preparation by a consultant(s) of a credible evaluation of approaches to reducing greenhouse gas emissions. The evaluation will inform the work of the Climate Legislative and Executive Workgroup.

News Articles: [NB: Students will also be encouraged to select other regional articles that reflect facts not biases.]

- *Casper Star Tribune*. 19 September 2013. "Has King Coal Lost His Crown? Big coal's hopes for long-term growth in Asia are threatened. U.S. regulations are tightening and new coal-fired power is unlikely. Natural gas is the environmentally cleaner choice for power generators." Jonathan Fahey, Associated Press. Front page.
- *Casper Star Tribune*. 19 September 2013. "BLM rejects lowball PRB bid. Kiewit's offer of 21 cents a ton is the lowest since 1998." Laura Hancock.
- *Casper Star Tribune*. 19 September 2013. "Taking the long way around. Wyo train traffic increases due to Colorado flooding."
- *Casper Star Tribune*. 21 September 2013. "They want to kill the coal industry. Governor, Congress members rip new coal-fired power rules." Ben Neary & Mead Gruver. Associated Press. Front page.
- *Casper Star Tribune*. 21 September 2013. "Obama puts clamps on carbon pollution." Dina Cappiello. Associated Press.
- *Casper Star Tribune*. 21 September 2013. "Who are the winners and losers under EPA carbon rules?"

Political Activism in Washington State:

- Washington State Climate Work Group Members:

- Governor Jay Inslee
- Senator Doug Ericksen (R, 42nd Dist.) - *Alternate* Senator Sharon Brown (R, 8th Dist.)
- Senator Kevin Ranker (D, 40th Dist.) - *Alternate* Senator Annette Cleveland (D, 49th Dist.)
- Rep. Joe Fitzgibbon (D, 34th Dist.) - *Alternates* Rep. Jake Fey (D, 27th Dist.) & Rep. Jessyn Farrell (D, 46th Dist.)
- Rep. Shelly Short (R, 7th Dist.) - *Alternate* Rep. Liz Pike (R, 18th Dist.)
- Climate Legislative and Executive Workgroup: Contact: Hedia Adelsman at (360) 407-6222/hade461@ecy.wa.gov

- **Scheduled Meetings:**

- Meeting Schedule (PDF) <http://www.governor.wa.gov/issues/economy/climateWorkgroup/documents/schedule.pdf>
- Notes from Past Meetings - <http://www.governor.wa.gov/issues/economy/climateWorkgroup/meetings.aspx>

- **Scheduled Public Hearings:**

- October 16, 5:00 - 8:20 p.m. http://www.governor.wa.gov/issues/economy/climateWorkgroup/documents/Agenda_20131016.pdf
- October 23, 6:00 - 9:20 p.m. http://www.governor.wa.gov/issues/economy/climateWorkgroup/documents/Agenda_20131023.pdf
- December 6, 2:00 - 4:00 p.m. <http://wecprotects.org/climate>

VTACC Bill Board Campaign:



"With your donations we were able to place this billboard on Highway 17 on the approach to Tsawwassen Ferry Terminal, within sight of Westshore Terminals coal port."

Voters Taking Action on Climate Change (Surrey, BC)

Voters Taking Action on Climate Change - www.realclimate.org

Mail inquiries to: PO Box 74504 -- Kitsilano RPO -- Vancouver BC -- V6K 4P4 -- Canada.

Email inquiries to: climate_action@vtacc.org

Additional Resources:

- *How to Get Your Daily Dose: Climate Progress* <http://thinkprogress.org/climate/issue>
Joe Romm's blog. Sign up and you'll receive a daily update, featuring the latest shocking information on how bad things really are, inspirational updates on policies and technologies that are making a difference, and insights into world actors who are helping find solutions and those that work to obscure, deny and obstruct. The highs and lows, all in one package. US-focused politics.
- *The Guardian*. <http://environment.guardian.co.uk/climatechange> European perspective on the climate crisis, policies and solutions. Opinion pieces by writers like George Monbiot.
- *The New Scientist* <http://environment.newscientist.com/channel/earth/climate-change> This site includes info on the political and economic aspects of fighting climate change as well as the underlying science of the problem. The site also features Climate Change: a guide for the perplexed which offers an excellent overview of the problem as well as rebuttals to common claims by climate change skeptics. The site is continually updated. <http://environment.newscientist.com/channel/earth/dn11462>
- *DeSmogBlog* <http://www.desmogblog.com> This is site dissects mainstream media coverage to expose contradictions, confusion, sloppy reporting and industry funded denial of the climate crisis. It is updated daily, covering a wide range of media sources, locally based and read around the world. The site provides links to key sites, an ever-expanding data base of bought and paid for climate change-deniers who are regularly quoted in the media, and summaries of things like "the scientific consensus on climate change."
- *The Science: Intergovernmental Panel on Climate Change* <http://www.ipcc.ch> The IPCC is the source of the quarterly reports in 2007 which drove much of the media coverage on climate change that year. When you read that "scientists say that it is very likely (a greater than 90 percent chance) that human activity has caused warming of the earth's atmosphere," it is likely a reference to these reports.
- *Real Climate* www.realclimate.org As per the website: "*Real Climate is a commentary site on climate science by working climate scientists for the interested public and journalists. We aim to provide a quick response to developing stories and provide the context sometimes missing in mainstream commentary. The discussion here is restricted to scientific topics and will not get involved in any political or economic implications of the science.*" The site is well indexed with an extensive archive.
- *Coal Train Facts* www.coaltrainfacts.org
- *Gateway Pacific Terminal* www.gatewaypacificterminal.com
- *Sierra Club* <http://sierraclub.org/coal/washington>

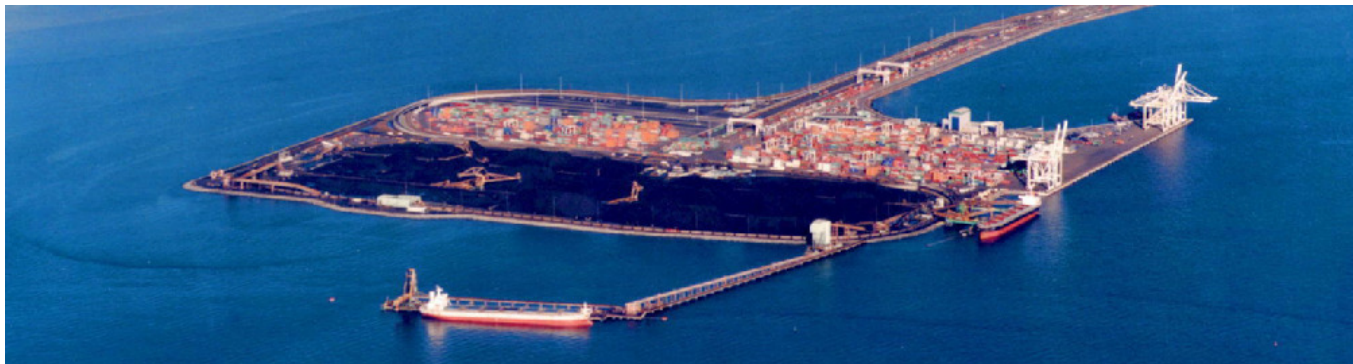
Classroom Materials:

- Poster "*Proposed Fossil Fuel Transport through Washington: Gateway to Extinction*". Color map with rail routes, Annual coal and crude oil exports today and proposed for future. 11" x 14". Infographic on back. Document includes "Ask Elected Leaders to Add Up the Trains and Vessels," "Tell Decision Makers to Look at the Puzzle, Not the Pieces," "Comment on the proposed Millennium Bulk Logistics Coal Terminal in Longview, Washington through November 18, 2013," "Scoping Comment Guide," "Ask Elected Leaders to Stop Externalizing the Costs of Transporting Fossil Fuels Through Washington State." Produced in October 2013 courtesy of Ms Terry Weschler (Bellingham, WA).
- Poster Series "*How long are you willing to wait?*" "*What are you willing to breathe?*" and others

Human Resources (Potential speakers, interviewees, key figures, potential field trip visits):

- Dana Lyons www.cowswithguns.com Bellingham activist and singer, appearances in Mount Vernon, Blanchard, Concrete, Bellingham, Conway, throughout Australia, Hawaii, Alaska, states between Washington and Wyoming.

- *Power Past Coal* www.re-sources.org Matt PETRYNI, Field Campaign Organizer, 215 West Holly Street, Suite H-20, Bellingham 98225. T. 360.303.1660. MattP@RE-Sources.org
- James Wells www.dailykos.com/user/James%20Wells 3373 Topaz Court, Bellingham, WA 98226. 360.733.3513 Read his daily blog, invite to show PowerPoints, get factual information on coal from someone who left Kentucky to come to the coal-free clean air of the Northwest.
- Carolyn and Ed Gastellum ecgastel@wavecable.com Skagit County leaders in stopping coal exports.
- Peter Goldmark Commissioner of Public Lands (Bellingham, WA) a scientist's perspective on global warming and coal usage. [www.youtube.com/watch?v=g2-J5077GVk, www.youtube.com/playlist?list=PL67AC8045492CA905, and www.bellinghamherald.com/.../public-lands-commissioner-re-elect.htm.
- Stephanie Smith and Kevin Washbrook represent *Voters Taking Action on Climate Change* (in British Columbia) [Kevin.washbrook@vtacc.org] for PO Box 74504, Kitsilano RPO, Vancouver, B.C. V6K 4P4, Canada.
- *Labor Representatives* Contact the county Democrats Office and the County Republicans Office for speakers willing to address secondary students on the topic of unions, labor, and policies when a new company applies for a permit to start a business locally.
- Fraser Surrey Docks Field Trip 11060 Elevator Road, Surrey, BC V3V 2R7, Canada. www.fsd.bc.ca 604.582.2268. Guide: Brady Eco, Manager, Sales & Customer Service, cell 778.838.5719, FAX 604.581.5488. 20-minute tour. No coal yet but much construction (thus, delays) on nearby roadways.
- Deltaport Field Trip 2 Roberts Bank Road, Delta, B.C. V4M 4G5, Canada. 604.267.5400. Visits: Lisa Hefford. 604.946.3406. lhefford@westshore.com Limited visits, only 9 am – 2 pm for one hour, with video, in August only. Arrange the tour in advance of visit. Just the drive to the security office, however, gives an excellent view of the coal yard for what appears to be miles and miles. www.westshore.com



Westshore Terminals - Example of Differing Perspectives:

“**Canada's Premier Mover of Coal** - from www.westshore.com:

Westshore Terminals has over four decades of operation since its opening in 1970. The coal export terminal located at Roberts Bank, Delta, British Columbia, some 32 kilometres south of downtown Vancouver and only 500 metres from the United States border, is part of Port Metro Vancouver. As Canada's No. 1 export coal facility, it shipped a record 27.3 million tonnes in 2011, easily surpassing the combined total coal exports of all other Canadian facilities.”

Conversely, ***Voters Taking Action on Climate Change*** say: “*Westshore Terminals, where there is already 8 Mt/yr of Powder River Basin coal being shipped via the BNSF line in White Rock. <http://www.westshore.com/> Big 33Mt/yr operation,”*

Unit Plan Procedures:

1. Identify for students two or more points of view on coal as a power source; coal as an income source for US labor, workers; coal as a source of heat for homes in Asia and North America. Encourage students to access to PowerPoints by Professors Steven Globerman and David Rossiter of Western Washington University (to be posted soon at

http://www.k12studycanada.org/resources_pps.html). Additional lesson plans relating to the coal train issues (particularly using debate) can also be found at http://www.k12studycanada.org/coal_lesson_plans.html.

2. In teams of four, students will choose one of the following topics to investigate (or other topics revealed after brainstorming):

- Labor and employment interests;
- Environmental impact on farming and ranching;
- Environmental impact on marine life;
- Environmental impact on health;
- Environmental impact on security and emergency services;
- Comparison of economic impacts of coal exports in North America and China;
- Influence of coal exports on Whatcom and Skagit Counties in the November 2013 elections;
- How did the two counties benefit in infrastructure from BSNF investments?

3. Have the school librarian introduce students to primary sources, discuss reliability of Internet sites, and gather a collection of both book and Internet sources that offer up-to-date information on coal, climate change, and the environment.

4. Ask students to prepare a 5-10 minute PowerPoint presentation (or other type of presentation, if preferred, after negotiations with instructor). These presentations will require the final two days of unit, assuming 80-minute periods.

5. To stimulate student action and inspire research, these verbs were placed on a poster and photocopied for students:

Access	Chat	Edit	Follow patterns	Mix	Present	Strategize
Add	Convey experiences	Elicit	Help	Obtain	Produce	Summarize
Address	Create	Engage	Include	Organize	Provide	Take responsibility for
Archive	Critique	Ensure	Investigate	Partner	Read	Try
Assess	Demonstrate	Express	List	Persuade	Research	Understand
Browse	Develop	Examine	Listen	Plan	Search	Vary
Change	Differentiate	Expand	Match	Prepare	Sequence	Weave

Evaluation/Assessment:

Oral presentations in a world language class may be made in the target language, if the level of students' skills is appropriate. Students will be evaluated on their skills at researching the facts, persuading the listeners, and establishing good eye contact. The instructor may use a rubric that emphasizes the skills in language, technology, and research, as appropriate, for the subject.

Possible Extension:

While this lesson plan works for world language classes when the correspondence with teenagers in Lorraine, France, is used, pen pals in Kentucky and other parts of North America as well as abroad can be used to support the communication skills in the National Standards for social studies, world languages, and English.

Final Thoughts:

Students will learn much from the interviews with family and "experts" as well from the experience of visiting the coal ports proposed by Gateway Pacific and Millennium Projects. They will learn the importance of making their voices heard in local and global politics. The community conversation that evolves when millions of tons of coal and millions of people are impacted by an industry is key in the evaluation of the success of supporting one side or the other. *Have we learned new things about building permits? About digging permits? About doing the act first and asking permission (and paying the fines) later? About similarities and differences in Canada and the US when considering coal and oil and their impacts on people?*

Skagit County and Whatcom County in Washington State have a rich agricultural history that will quickly be identified in the debates about the coal exports proposed and the addition of eighteen more trains per day delaying truck deliveries to local stores, as well as blocking emergency access to homes and businesses. *Will the promise of employment and the downplaying of environmental impact persuade secondary students to support coal exports from British Columbia and Washington State ports?*