

Local Living Textbook
Online Resources for Community Action (ORCA)

Library Links – Ecological Economics

Definitions for “Traditional” Economics

1. **The Economist:** <http://www.economist.com/research/economics/> Search engine with definitions for economic terms from the perspective of “traditional economics.”

Ecological Economics

1. **Earth Economics:** Non-profit located in Tacoma provides robust, science-based, ecologically sound economic analysis, policy recommendations and tools to positively transform regional, national and international economics, and asset accounting systems. Working with leading ecologists, economists and modelers, we serve a large circle of businesses, non-profits, government agencies, policy makers and media channels with research, reports, presentations, workshops and investigations. <http://eartheconomics.org/>
2. **What are Ecosystem Services?**
<http://www.eartheconomics.org/FileLibrary/file/Reports/Puget%20Sound%20and%20Watersheds/NisquallyFactsheet1.pdf>
3. **Ecosystem Services of Puget Sound:** A ground breaking economic assessment of the value of Puget Sound ecosystem services.
[http://www.eartheconomics.org/FileLibrary/file/Reports/A New View of the Puget Sound Economy.pdf](http://www.eartheconomics.org/FileLibrary/file/Reports/A%20New%20View%20of%20the%20Puget%20Sound%20Economy.pdf)
4. **Asset Value of the Nisqually Watershed:** A case study of one Puget Sound watershed.
<http://www.eartheconomics.org/FileLibrary/file/Reports/Puget%20Sound%20and%20Watersheds/NisquallyFactsheet4.pdf>
5. **Economics of the Puget Sound:** A two-page “quick facts” handout from the Department of Ecology on the Economics of the Puget Sound: <http://www.ecy.wa.gov/pubs/0601006.pdf>
6. **The Millennium Ecosystem Assessment Project:** Assesses the consequences of ecosystem change for human well-being. From 2001 to 2005, the MA involved the work of more than 1,360 experts worldwide. Their findings provide a state-of-the-art scientific appraisal of the condition and trends in the world’s ecosystems and the services they provide, as well as the scientific basis for action to conserve and use them sustainably.
<http://www.maweb.org/en/Index.aspx>
7. **Communicating Ecosystem Services:** An outstanding set of outreach tools on specific ecosystem services designed for use by scientists and other professionals to inform the public and policy makers about the importance of maintaining healthy ecosystems and protecting biodiversity. <http://www.esa.org/ecoservices/>

8. **Ecosystem Marketplace**, a project of Forest Trends, is a leading source of news, data, and analytics on markets and payments for ecosystem services (such as water quality, carbon sequestration, and biodiversity). <http://www.ecosystemmarketplace.com/>

Green Business Networks / Standards / Indicators

1. **B Corps:** A new type of corporation benefiting all stakeholders not just shareholders. B Corps use the power of business to solve social and environmental problems. As of 2011 Laws have been passed in seven states creating a new kind of corporation for a new economy. <http://bcorporation.net/>
2. **21st Century Corporation: The Ceres Roadmap to Sustainability:** A practical roadmap for integrating sustainability into the DNA of business—from the boardroom to the copy room. It analyzes the drivers, risks and opportunities involved in making the shift to sustainability, and details strategies and results from companies who are taking on these challenges. The Roadmap is designed to provide a comprehensive platform for sustainable business strategy and for accelerating best practices and performance. <http://www.ceres.org/company-network/ceres-roadmap>
3. **Earth Policy Institute / Eco-Economy Indicators:** Widely respected international think tank dedicated to planning a sustainable future as well as providing a roadmap of how to get from here to there. The Earth Policy Institute uses twelve Eco-Economy Indicators to track trends and measure progress in building a sustainable economy. <http://www.earth-policy.org/publications/C39>
4. **Green America:** A national non-profit that focuses on economic strategies and consumer actions to solve social and environmental problems; mobilizing people in their various economic roles as consumers, investors, workers, and business leaders. <http://www.greenamerica.org/>
5. **Sightline Institute Cascadia Scorecard:** The Pacific Northwest's sustainability report card. It tracks seven trends that are crucial to the region's future: health, economy, population, energy, sprawl, wildlife, and pollution. The Scorecard reveals that we are making slow and tentative progress towards our shared goals: long and healthy lives; shared economic prosperity; and a legacy of thriving nature. <http://scorecard.sightline.org/>
6. **Network of Business Innovation and Sustainability:** NBIS provides businesses who are serious about profitable sustainability with the connections, skills, tools, programs, and resources that are vital for success in the Green Economy. NBIS cultivates best practices and innovation to position business members and clients to achieve success in the changing global marketplace and within the context of engagement with local economies and ecosystems. <http://nbis.org/about-nbis/profitable-sustainability/>
7. **Eastside Sustainable Business Alliance:** ESBA resources are primarily dedicated to serving businesses within participating C-7 New Energy Partnership cities, which include Bellevue,

Issaquah, Kirkland, Mercer Island, Redmond, Renton, and Sammamish.
<http://esba.sustainableeastside.org/programs/in-your-city>

8. **Seattle Good Business Network:** Non-profit network of residents and local independent businesses that share a vision for a sustainable local, living economy, one that's rooted in local ownership, a healthy environment, and strong community.
<http://www.seattlenetwork.org/>
9. **EnviroStars:** <http://www.envirostars.org/> A green business certification program related to reducing hazardous waste. Originally created in King County, the program has spread to Jefferson, Kitsap, Pierce, Spokane, and Whatcom Counties. Find over 700 certified businesses, from Auto repair to Zoos, in 60 plus cities. Consumers can support these progressive business leaders who have made the commitment and are working to spread environmentally and economically sustainable practices.
10. **Green Seal:** A non-profit that uses science-based programs to empower consumers, purchasers and companies to create a more sustainable world. Green Seal develops life cycle-based sustainability standards for products, services and companies and offers third-party certification for those that meet the criteria in the standard. Green Seal has been actively identifying and promoting sustainability in the marketplace and helping organizations be greener in a real and effective way since 1989. <http://www.greenseal.org/>
11. **GreenBiz Group:** Defining and accelerating the business of sustainability by providing clear, concise, accurate, and balanced information, resources, and learning opportunities to help companies of all sizes and sectors integrate environmental responsibility into their operations in a manner that supports profitable business practices.
<http://www.greenbizgroup.com/about>
12. **Precautionary Principle:** The historic 1998 Wingspread Statement on the Precautionary Principle summarizes the principle this way: "When an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."
<http://www.sehn.org/ppfaqs.html>
13. **Forest Stewardship Council:** Coordinates principles, criteria, and standards that span economic, social, and environmental concerns. The FSC standards represent the world's strongest system for guiding forest management toward sustainable outcomes. Like the forestry profession itself, the FSC system includes stakeholders with a diverse array of perspectives on what represents a well-managed and sustainable forest.
http://www.fscus.org/about_us/
14. **Sustainable Forestry Initiative:** Voluntary third-party forest certification began in the 1990s in response to market concerns about forest management and illegal logging, primarily in developing countries. The SFI program was launched in 1994 as one of the U.S. forest sector's contributions to the vision of sustainable development established by the 1992 United Nations Conference on Environment and Development. SFI Inc. is an independent, non-profit organization responsible for maintaining, overseeing and improving a sustainable forestry certification program that is internationally recognized and is the largest single

forest standard in the world. <http://www.sfiprogram.org/sustainable-forestry-initiative/basics-of-sfi.php>

Selected Businesses

1. **Interface:** <http://www.interfaceglobal.com/Sustainability.aspx>
2. **Seventh Generation Cleaning Products:** <http://www.7genreport.com/>
3. **Weyerhaeuser:** <http://www.weyerhaeuser.com/Sustainability>
4. **Waste Management:** <http://www.wm.com/sustainability/index.jsp>
5. **WalMart:** <http://walmartstores.com/sustainability/>
6. **Pagliacci Pizza:** <http://www.pagliacci.com/green/composting/>
7. **Stahlbush Farm:** <http://www.stahlbush.com/>
8. **Tom's of Maine:** <http://www.tomsofmaine.com/home>

Sustainable Cities, County, Puget Sound

1. **Sustainable City Rankings:** Extensive coverage on the greening of the 50 most populous cities in the nation; the most complete report card on urban sustainability in America. Benchmarks each city's performance in 16 areas of urban sustainability
<http://www.sustainlane.com/us-city-rankings/>
2. **Paul Hawken on Cities - Essay:** <http://www.sustainlane.com/us-city-rankings/articles/introduction-by-paul-hawken/A424DJAXRLANIR1HOAR1PS1A2C9O>
3. **The Seattle 2030 District:** A business alliance to achieve high performance in real estate:
http://2030district.org/seattle/files/SEATTLE_2030_DISTRICT.pdf
4. **City of Seattle Office of Sustainability and Environment:**
<http://www.cityofseattle.net/environment/>
5. **King County Dept of Natural Resources and Parks, Performance Measures:** These measures present the degree that DNRP programs are achieving their stated targets. Because of the breadth of DNRP programs, the department's goals and performance measures address topics that are environmental, social and fiscal in nature. DNRP distinguishes between environmental indicators and performance measures based on the degree of the agency's influence. Measures that have many contributing factors are included as indicators, while measures that are strongly influenced by DNRP policies, programs, and practices are considered performance measures. Under each goal are four to six objectives, or roll-up measures, each of which has a pie chart for a quick summary of performance in this area. Below the summary/roll-ups are details of individual measures and, where relevant, technical notes with specific information about data sources or anomalies with the measure information. <http://your.kingcounty.gov/dnrp/measures/performance/default.aspx>

6. **ICLEI –Local Governments for Sustainability:** The STAR Community Index Sustainability Goals and Guiding Principles represents a milestone in the national movement to create more sustainable, livable communities. The Goals set a new national standard, and serve as an invaluable resource for local governments. King County is one of ten communities nationwide selected as a pilot site. <http://www.icleiusa.org/sustainability/star-community-index/star-goals-and-guiding-principles>

7. **Cascade Agenda:** Fonterra, the largest conservation and community building organization in the Northwest, developed the Cascade Agenda as a 100 year planning framework. In the next 100 years, our regional population will double, growing to more than 10 million people. Where we will live, how we get to work, what our neighborhoods will look like, what and the relationship between rural and urban lands will be critical issues? <http://www.fonterra.org/>

8. **Puget Sound Action Agenda - 20 Vital Signs for Tracking Ecosystem Recovery: Puget Sound Dashboard of Vital Signs:** In 2010, the Puget Sound Partnership engaged regional experts and the public in identifying the key ecosystem indicators and pressures that would help identify whether we are making progress in restoring the Sound. The Dashboard serve as a report card with each section providing data and an ongoing list of the efforts that Partners are making and suggestions on what individual citizens can do to join this effort. All of this information is continuously updated. <http://www.psp.wa.gov/vitalsigns/index.php>

9. **Living Building Challenge:** Living Building Challenge is a philosophy, advocacy tool and certification program that addresses development at all scales. It is comprised of seven performance areas: Site, Water, Energy, Health, Materials, Equity and Beauty. These are subdivided into a total of twenty Imperatives, each of which focuses on a specific sphere of influence. The purpose of the Living Building Challenge is to define the most advanced measure of sustainability in the built environment possible today and acts to diminish the gap between current limits and ideal solutions. Whether the project is a single building, a park, a college campus or even a complete neighborhood community, Living Building Challenge provides a framework for design, construction and the symbiotic relationship between people and all aspects of the built environment. <https://ilbi.org/>

Great Books

1. Brown, Lester R., ***Plan B 4.0; Mobilizing to Save Civilization***. (2010). New York: W.W. Norton & Company, Inc. The full book, chapter by chapter and other exceptional resources can also be downloaded for free online at: http://www.earth-policy.org/book_bytes/

2. Brown, Lester R., ***Eco-Economy; Building and Economy for the Earth***. (2001). New York: W.W. Norton & Company, Inc.

3. Batker, David and de Graaf, John, ***What's the Economy For, Anyway? Why It's Time to Stop Chasing Growth and Start Pursuing Happiness***. (2011) New York: Bloomsbury Publishers.

4. Daly, Herman E., Farley Joshua, ***Ecological Economics, Principles and Applications***. (2004). Washington DC., Island Press.

5. Edwards, Andres, *The Sustainability Revolution; Portrait of a Paradigm Shift*. (2005). Gabriola Island BC, Canada, New Society Publishers.
6. Gilding, Paul, *The Great Disruption; Why the Climate Crisis Will Bring On the End of Shopping and the Birth of a New World*. (2011) New York: Bloomsbury Press.
7. Hawken, Paul, *The Ecology of Commerce; A Declaration of Sustainability*. (1993) New York: HarperBusiness, HarperCollinsPublishers
8. Hawken, Paul; Lovins, Amory; Lovins, Hunter, *Natural Capitalism*. (1999) Boston, Little Brown and Company.
9. James, Sarah, Lahti Torbjorn, *The Natural Step for Communities; How Cities and Towns can Change to Sustainable Practices*. (2004) Gabriola Island BC Canada, New Society Publishers.
10. Jones, Van, *The Green Collar Economy*. (2008). New York: HarperCollins Publishers.
11. Korten, David C., *Agenda for a New Economy; From Phantom Wealth to Real Wealth*. (2009). San Francisco, Berrett-Koehler Publishers, Inc.
12. Korten, David C., *The Great Turning; From Empire to Earth Community*. (2006). San Francisco, Berrett-Koehler Publishers, Inc.
13. McKibben, Bill, *Deep Economy; The wealth of Communities and the Durable Future*. (2007) New York, Times Books, Henry Holt and Company LLC.
14. Wackernagel, Mathis, Rees, William, *Our Ecological Footprint*. (1996). Gabriola Island BC, Canada: New Society Publishers.

Periodicals

1. *Sustainable Industries Journal*, Published monthly by Sustainable Media Inc.
<http://www.sustainableindustries.com/>
2. *Green American*, Published bi-monthly by Green America,
<http://www.greenamerica.org/pubs/greenamerican/>
3. *YES! Magazine*, Published quarterly by Positive Futures Network:
<http://www.yesmagazine.org/>

From Unique Perspectives

1. **Annie Leonard, The Story of Stuff Project:** <http://www.storyofstuff.org/tag/annie-leonard/>
2. Ryan, John C., Durning, Alan, *Stuff; the Secret Life of Everyday Things*. (1997) Seattle: Northwest Environmental Watch.

3. **Blue Green Alliance:** National, strategic partnership between labor unions and environmental organizations dedicated to expanding the number and quality of jobs in the green economy. Both working people and environmentalists have a stake in building the new, green economy. Transforming our economy through renewable energy, energy efficiency, mass transit and rail, a new smart grid and other solutions to global warming, has the potential to create millions of jobs, while reducing global warming emissions and moving America toward energy independence. <http://www.bluegreenalliance.org>
4. **Green Sports Alliance: A North American collaborations** venue operators, sports marketing directors and environmental scientists have collaborated through the Alliance to exchange their real world experiences and create metrics that are meaningful and measurable. Launched in March 2011 with representation from multiple sports, partners gain a better understanding of the impact sporting events have on the environment, and work together to provide inspiration and a roadmap for teams and venues to make changes to reduce that impact. <http://greensportsalliance.org/about-us>
5. **More Jobs Less Pollution; Growing the Recycling Economy in the U.S.**
<http://www.bluegreenalliance.org/admin/publications/files/MoreJobsLessPollutionFinal-1.pdf>
6. **Green For All:** National organization working to build an inclusive green economy strong enough to lift people out of poverty. <http://www.greenforall.org/about-us/>
7. **Primer on Green Collar Jobs; Sightline Institute:**
<http://www.sightline.org/research/jobs/green-jobs-primer>
8. **UW Climate Impacts Group:** Engages in climate science in the public interest to understand the consequences of climate variability and climate change for the Pacific Northwest. Focuses on the intersection of climate science and public policy.
<http://cses.washington.edu/cig/pnwc/pnwc.shtml>
9. **Primer on the Science and Economics of Ocean Acidification; Sightline Institute:**
<http://www.sightline.org/research/energy/ocean-acidification/northwest-ocean-acidification/OA-primer.pdf>
10. Lombard, John, *Saving Puget Sound; A Conservation Strategy for the 21st Century*. (2006) American Fisheries Society in association with University of Washington Press.
11. Goldman, Daniel, *Ecological Intelligence; How Knowing the Hidden Impacts of What We Buy Can Change Everything*. (2009). NY. Broadway Books
12. Lichatowich, Jim, *Salmon Without Rivers: A History of the Pacific Salmon Crisis*. (1999). Island Press.

13. Stewart, Hilary, *Indian Fishing; Early Methods on the Northwest Coast*, (1977). Seattle, University of Washington Press
14. Stewart, Hilary, *Cedar; Tree of Life to the Northwest Coast Indians*. (1984). Seattle, University of Washington Press.
15. Steffen, Alex (Editor). *World Changing; User's Guide for the 21st Century*. New York, Abrahms
16. Weisman, Alan, *The World Without Us*. (2007) New York, Thomas Dunne Books.
17. **Interview with a Fungus**; an Essay by Diane Brooks Pleninger, <http://www.economist.com/node/2187789>

Green Chemistry Links

1. **Green Chemistry, Environmental Protection Agency:** The design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances. Green chemistry applies across the life cycle of a chemical product, including its design, manufacture, and use. <http://www.epa.gov/opptintr/greenchemistry/index.html>
2. **Green Chemistry Education; Beyond Benign:** K-12 Education at Beyond Benign explores curriculum content with a view to the future and the sustainability of social, industrial, economic and environmental sustainability. Curriculum materials take an independent stance where students are put in the position of decision maker and scientific issues are put under a neutral microscope. <http://www.beyondbenign.org/K12education/kthru12.html>

Environmental and Sustainability Education

1. **OSPI Environmental and Sustainability Education**
<http://www.k12.wa.us/EnvironmentSustainability/default.aspx>
2. **Pacific Education Institute:** <http://www.pacifieducationinstitute.org/>
3. **Center for Ecoliteracy:** <http://www.ecoliteracy.org/discover>
4. **Inquiry based Learning:**
<http://www.thirteen.org/edonline/concept2class/inquiry/index.html>
5. **Habits of Mind:** <http://www.instituteforhabitsofmind.com/>
6. **Systems Thinking:** <http://www.watersfoundation.org/>
7. **The Watershed Report:** Short videos narrated entirely by high school students tracking positive sustainability trends within the 13 school districts and 28 cities of the Greater Lake Washington Watershed. <http://www.cedarriver.org/programs/watershed-report/video-library-1>

Facing the Future Resources <http://www.facingthefuture.org/>

Here is a handy annotated walk through of Facing the Future's resources. Thank you Dave Wilton! dave@facingthefuture.org and Laura Skelton! laura@facingthefuture.org

The first four resources (three curriculum units and our global sustainability resources section) are listed here because they are the most accessible online. The latter two Teacher Guides require teachers to purchase the book to be able to access all of the lesson plans listed. To whet your appetite we have listed specific lesson plans that have an economic perspective.

Facing the Future's **curriculum resources** educate students about global issues and engage them in thinking critically about real solutions. To complement its curriculum resources, *Facing the Future* has created a **global sustainability resources section** to help educators and students teach and learn about global issues and sustainability.

The three curriculum resources listed below are all available at no cost to Washington State Educators.

1. **Water, Science, and Civics: Engaging Students with Puget Sound** is a one-week unit with five interdisciplinary lessons. The unit's lessons will lead your students through an exploration of the significance of Puget Sound, learning specifically about the economic, social, and environmental services the Sound provides for humans.
2. **Buy, Use, Toss?** is a series of ten fully-planned lessons will lead your students through an exploration of the system of producing and consuming goods that is called the materials economy. Students will learn about the five major steps of the materials economy: Extraction, Production, Distribution, Consumption, and Disposal. They will analyze the sustainability of these steps, determining how consumption can benefit people, economies, and environments. A number of the lessons include optional links to the online movie, **The Story of Stuff**.
3. **Understanding Sustainability** is a two-week unit for Washington State social studies grades 9-12. This activity-based curriculum unit contains eight engaging and inspiring lessons that help students build the connections between economy, history, democracy and sustainability. Each lesson in the unit is aligned with Washington State high school social studies GLEs. For every topic covered, students develop creative tools to contribute to sustainable solutions in their local and global communities.

The two curriculum resources listed below are available for purchase on Facing the Future's website.

Engaging Students through Global Issues includes 10 lesson plans to help students understand the complexity of global economic issues and sustainable solutions, and offers creative tools for them to take action in their local and global community. The book can be used as a core teaching component for a semester or year-long course, as a short unit on global issues, or as an engaging contextual framework within which core subjects are taught. **The following lessons incorporate an economic perspective:**

- **Lesson 6: Is It Sustainable?** Students define and discuss sustainability and its 3 key components: the economy, the environment, and society. Students analyze the sustainability of a variety of actions taken by individuals, businesses, and governments, using a Venn diagram to help organize the process.

- **Lesson 12: Watch Where You Step!** Students identify the components of an Ecological Footprint by creating a web diagram of all the resources they use in their everyday lives and the mark or “footprint” this consumption leaves on the environment. The activity emphasizes the interconnectedness of lifestyle, population, and environmental impacts, and focuses on solutions to reduce Ecological Footprints.
- **Lesson 21: What’s Up With the GDP?** In this economics simulation, students graph changes in the personal incomes of different community residents and in the community’s proportion of the Gross Domestic Product (GDP) following an oil spill. The lesson explores the effect of an environmental disaster on the GDP, and the accuracy of GDP as a measurement of a community’s overall health.
- **Lesson 27: Three Faces of Governance:** Students create a national energy policy via cooperation and negotiation among the 3 faces of governance: the State (Government), Civic Organizations, and the Private Sector. In groups representing each of these areas, students work to accomplish their individual policy goals while negotiating and forming coalitions with other groups to strengthen their overall energy policy.
- **Lesson 28: Taxes: Choices and Trade-offs:** In this federal tax simulation lesson, students representing “special interest groups” discuss, recommend, and lobby for a budget allocation for federal tax spending. Interest groups include military, education, housing, healthcare, social security, and the environment. The exercise continues over consecutive years in which taxes are lowered and raised.
- **Lesson 30: Shop Till You Drop?** In this simulation, students experience how resources are distributed and used by different people based on access to wealth. Students discuss and work toward personal and structural solutions to help alleviate poverty.
- **Lesson 31: Let Them Eat Cake!** Cutting and distributing pieces of cake, which represent shares of natural resources that students must negotiate and allocate, illustrates the inequitable distribution of resources around the world and the interconnectedness of human economic and social activities and resource scarcity.
- **Lesson 32: Everyone Does Better When Women Do Better:** Students enact the roles of citizens and government representatives from various countries at a “town meeting” forum. Citizens address their local government representative with concerns about the status of women and girls in their country and recommend potential solutions.
- **Lesson 33: What’s Debt Got to Do With It?** Students model the impact of debt on the social and economic health of developing countries. Working in “very poor country” groups, students choose how to allocate limited funds to different sectors of their country’s economy. The groups take on loans to help their country develop and experience what happens when their funds are diverted to debt repayment and away from investment.
- **Lesson 34: Microcredit for Sustainable Development:** Students research a developing country and then apply for a \$100 microcredit grant to start a small business, as if they were a person living in that country. A business plan and an illustrated poster are presented to a “sustainable development panel of experts” (students) who determine whether or not the business plan is economically, socially, and environmentally sustainable.

Real World Math is a package of teacher’s guide and student workbook of 15 lessons that teach foundational algebra and geometry skills within the context of global issues and sustainability. The lessons encourage students to build on their mathematics knowledge while simultaneously using 21st-century skills, such as critical thinking, collaboration with peers, and applying a global

perspective. These combined skills will help prepare students for the future and engage them in problem-solving activities similar to ones they will encounter as active, engaged citizens. **The following lessons incorporate an economic perspective:**

- **Lesson 2: Introduction to Algebra - Poverty & Microcredit:** Through a simulation activity, students learn about microcredit lending — a financing structure that supports small-scale business ventures and is designed to help people rise out of poverty. Students solve algebraic equations in order to complete a microcredit loan application.
- **Lesson 7: Rational Numbers - Financial Decisions:** Students begin by analyzing information from a credit card offer. They then work through calculations to analyze financial choices made by 2 young people. The activity connects to national budgeting and debt by investigating the revenues and expenditures of 2 countries.

Lesson 15: Data Analysis - Quality of Life: In this 2-day lesson, students develop indicators to measure quality of life and conduct a survey of peers and adults to obtain data for their indicators. They analyze the survey data by calculating measures of central tendency and producing charts to demonstrate their results.