Recommended Resources – March 4, 2011

Books:

1. Rivoli, P. (2009). *The Travels of a T-shirt in the Global Economy.* Hoboken: John Wiley & Sons.
2. Fletcher, K. (2008). *Sustainable Fashion & Textiles: Design Journeys:* London: Earthscan.
3. Chanin, N. (2008). *Alabama Stitch Book.* New York: STC Craft/A Melanie Falick Book.
4. Chanin, N. (2010) *Alabama Studio Style.* New York: STC Craft/A Melaine Falick Book.
5. Honore, C. (2005) *In Praise of Slowness: How a Worldwide Movement is Challenging the Cult of Speed.* New York: Harper-Collins.
6. Orr, David W. *The Nature of Design: Ecology, Culture, and Human Intention* Oxford University Press, New York, NY 2002 ISBN: 0-19-514855-X
7. Orr, David W. *Earth in Mind: On Education, Environment, and the Human Prospect* Island Press, Washington, DC 1994 ISBN: 1-55963-259-X

Websites:

FIT-NSF Project Website: http://www.tech-fit.net

CET Website: www.fitnyc.edu/CET

Project Kaleidoscope url: http://www.aacu.org/pkal/

- MIT/Sloan Management Review: Special Report; *The Business of Sustainability: Findings and Insights From the First Annual Business of Sustainability Survey and the Global Thought Leaders' Research Project* 2009 - http://www.mitsmr-ezine.com/busofsustainability/2009?#pg33
- MIT/Sloan Management Review / *Sustainability and Innovation: Second Annual Report 2010* http://sloanreview.mit.edu/sustainability/
- Sustainable Business Institute: http://sustainablebusiness.org/2.html/
- Senge, Peter F. (2008) *The Necessary Revolution: How Individuals and Organizations are Working Together to Create a Sustainable World* New York: Doubleday Currency
- World Business Council for Sustainable Development: *Vision 2050: The new Agenda for Business* http://www.wbcsd.org/web//projects/BZrole/Vision2050_Summary_Final.pdf
- The United States Business Council for Sustainable Development: http://www.usbcsd.org/
- The Business of a Better World: http://www.bsr.org/en/
- The Sustainable Consumption Initiative: http://www.weforum.org/issues/sustainable-consumption
- U.N. Global Compact and Accenture Sustainability and Business Study of 766 Global CEO's: http://www.unglobalcompact.org/news/42-06-22-2010
  - *A new Era of Sustainability 2010* Accenture/ UN Global Compact Study: http://www.unglobalcompact.org/docs/news_events/8.1/UNGC_Accenture_CEO_Study_2010.pdf

Links to FIT Library's Sustainable Design Resource Guide:

Library Home Page: http://www.fitnyc.edu/library.asp

LibGuides Home Page: www.libguides.com

FIT Libguides: www.fitnyc.libguides.com

Sustainable Design Libguides page: http://fitnyc.libguides.com/content.php?hs=a&pid=65853

The following article is from Michigan State University:

College Students Lack Scientific Literacy. Study Finds

Contact: Andy Henion, University Relations, Office: (517) 355-3294, Cell: (517) 281-6949, Andy.Henion@ur.msu.edu; Charles "Andy" Anderson, Education, Office: (517) 432-4648, andya@msu.edu -Published: Jan. 07, 2011 Charles "Andy" Anderson, professor of teacher education, researches environmental literacy among U.S. students.

EAST LANSING, Mich. -Most college students in the United States do not grasp the scientific basis of the carbon cycle - an essential skill in understanding the causes and consequences of climate change, according to research published in the January issue of BioScience.

The study, whose authors include several current and former researchers from Michigan State University, calls for a new way of teaching -and, ultimately, comprehending -fundamental scientific principles such as the conservation of matter.

"Improving students' understanding of these biological prinCiples could make them better prepared to deal with important environmental issues such as global climate change," said Charles "Andy" Anderson, MSU professor of teacher education and co-investigator on the project.

The study was led by Laurel Hartley, assistant professor at the University of Colorado Denver who started the work as a postdoctoral researcher at MSU. Co-researchers include Anderson, Brook Wilke, Jonathon Schramm and Joyce Parker, all from MSU, and Charlene D'Avanzo from Hampshire College.

The researchers assessed the fundamental science knowledge of more than 500 students at 13 U.S. colleges in courses ranging from introductory biology to advanced ecology.

Most students did not truly understand the processes that transform carbon. They failed to apply principles such as the conservation of matter, which holds that when something changes chemically or physically, the amount of matter at the end of the process needs to equal the amount at the beginning.
(Matter doesn't magically appear or disappear.)

Students trying to explain weight loss, for example, could not trace matter once it leaves the body; instead they used informal reasoning based on their personal experiences (such as the fat "melted away" or was "burned off'). In reality, the atoms in fat molecules leave the body *(mostly through breathing)* and enter the atmosphere as carbon dioxide and water.

Most students also incorrectly believe plants obtain their mass from the soil rather than primarily from carbon dioxide in the atmosphere. "When you see a tree growing," Anderson said, "it's a lot easier to believe that tree is somehow coming out of the soil rather than the scientific reality that it's coming out of the air."

The researchers say biology textbooks and high-school and college science instructors need to do a better job of teaching the fundamentals -particularly how matter transforms from gaseous to solid states and vice-versa.

It won't be easy, Anderson said, because students' beliefs of the carbon cycle are deeply engrained *(such* as *the misconception that plants get most of their nutrients from the soil).* Instructors should help students understand that the use of such "everyday, informal reasoning" runs counter to true scientific literacy, he said.

The implications are great for a generation of citizens who will grapple with complicated environmental issues such as clean energy and carbon sequestration more than any generation in history, Anderson said.

"One of the things I'm interested in," he said, "is students' understanding of environmental problems. And probably the most important environmental problem is global climate change. And that's attributable to a buildup of carbon dioxide in the atmosphere. And understanding where that carbon dioxide is coming from and what you *can* do about it fundamentally involves understanding the scientific carbon cycle."