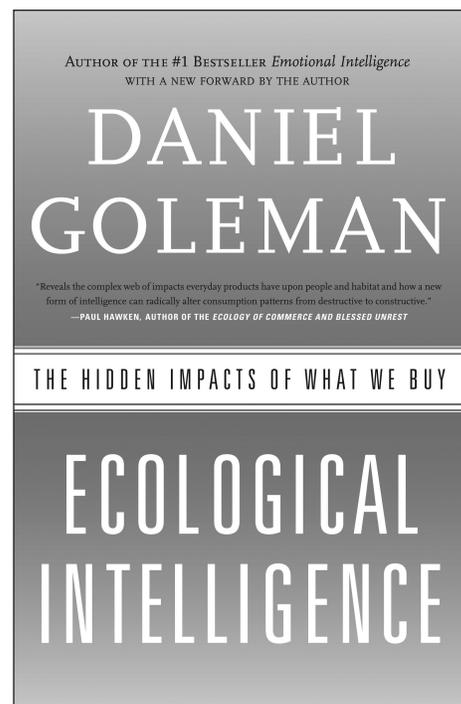




Ecological Intelligence

The Hidden Impacts of What We Buy

by Daniel Goleman



Broadway Business | TR
978-0-385-52783-5 | 288 pp. | \$16.00/\$19.00 Can.

READING LEVEL: 11th Grade-Up

Virginia Tech has selected *Ecological Intelligence* for its 2009 and 2010 Common Book Project.

“The theme of ecological awareness and environmental sustainability emerged as we considered a variety of books. The selection committee felt that such a theme would offer many options for engagement and use of the book across all colleges and disciplines. It could connect with new university efforts in the area of heightened environmental awareness and action and provide opportunities to facilitate community service options for students and faculty.”

—Ron Daniel, associate provost for undergraduate education, Virginia Tech

• note to teachers •

Ecological Intelligence is a provocative book that will interest students in a wide range of high school and undergraduate programs. Because it examines topics at the intersection of environmental studies, economics, business, and psychology, it would enhance courses of study in any of these disciplines and provide a real-world, everyday context for exploring them.

This Teacher's Guide is organized by chapter and may be used in a variety of ways. The teacher may assign the book a chapter at a time and reflect on the topics more deeply through that chapter's questions and activities, or assign the book in its entirety, selecting questions and activities from throughout the guide that fit the course objectives.

• about this book

Ecological Intelligence examines the profound environmental, social, and health consequences of everyday consumer choices. In this thought-provoking book, author Daniel Goleman defines “ecological intelligence” as individuals’ ability to apply what they learn about their impact on the environment to make changes in their behavior and live more sustainably. He explains how and why consumers so often are clueless about the effects of their choices, and explores cutting-edge technologies that will enable consumers to make smarter purchasing decisions in the future. He makes the case that by boosting ecological intelligence through this “radical transparency,” companies will incrementally shift their practices, moving our society toward sustainability and changing things for the better.

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• about the author

DANIEL GOLEMAN is an internationally known psychologist and author. He earned a bachelor's degree at Amherst College and a doctorate in Psychology at Harvard University. In the 1970s, he wrote his first book, now called *The Meditative Mind*, based on his doctoral research. He became a writer for *Psychology Today*, and then in 1984 began reporting on brain and behavioral sciences for *The New York Times*.

While reporting for the *Times*, Goleman became interested in research on emotions and the brain, and wrote about this topic in his best-selling book, *Emotional Intelligence: Why It Can Matter More Than IQ* (1996). Since leaving the *Times* to work on his own projects in 1996, he has written many books, including, *Working with Emotional Intelligence* (1998), *Primal Leadership: Realizing the Power of Emotional Intelligence* (2002), *Social Intelligence: The New Science of Human Relationships* (2006), and most recently, *Ecological Intelligence: How Knowing the Hidden Impacts of What We Buy Can Change Everything* (2009).

In addition to writing, Goleman co-founded the Collaborative for Academic, Social, and Emotional Learning, which is now based at the University of Illinois at Chicago, and the Consortium for Research on Emotional Intelligence in Organizations at Rutgers University, which he also co-directs.

• teaching ideas

For each chapter, the Teacher's Guide includes the following elements:

- **Synopsis** – a brief overview of the chapter.
- **Terms** – a listing of key terms introduced or used in the chapter (when applicable).
- **Questions** – suggestions for in-class discussion. These questions also may be used as writing prompts or assessment.
- **Activities** – ideas for expanding learning beyond the book through a variety of learning strategies. These suggestions may be used as classroom activities, group projects, research topics, or course assignments.

• discussion questions & suggested activities

Chapter 1 — The Hidden Price of What We Buy

Synopsis: Goleman gives examples of the far-reaching environmental, health, and social effects of things we buy. He introduces the term “ecological intelligence” and suggests that people could make a positive impact through their consumer choices.

Terms: impulse buy (1), ecological intelligence (3), marketplace transparency (3), industrial ecology (4), radical transparency (6), mantra (11)

Questions:

1. What does Goleman mean by ecological intelligence (3)?
2. What kinds of “hidden price tags” are associated with the products we buy (2)?
3. How is industry like an ecosystem, as Goleman suggests (5)?
4. What is radical transparency (6)? Do you think it could make a difference in how people behave?
5. What are some of the health effects of the things we buy (9)?
6. Do you agree with Goleman when he says that as individual shoppers, we have an illusion of choice (10)?

• discussion questions & suggested activities (continued)

7. Goleman says that the belief that cheaper is always better is being replaced by a new mantra (11). What do you think that mantra is? Do you think it has taken hold?
8. This book focuses on ways that consumer purchases can positively affect the environment, our health, and society. How might not buying things have an even greater impact?

Activities:

1. Choose a product, such as a toy or food item, and see what behind-the-scenes information you can discover about it on the Internet.
2. Draw two maps or illustrations comparing a natural system, such as the food cycle, and an industrial system, such as electric power production and use. In what ways are these systems alike and different

Chapter 2 — “Green” Is a Mirage

Synopsis: Using specific examples like a recycled glass jar, a cloth shopping bag, and an organic t-shirt, Goleman shows how even things we may think of as “green” can have serious environmental and social impacts. He points out that green is a relative term, not an end result, and that life cycle assessment (LCA) is one way to learn about all the inputs and outputs involved in a particular product.

Terms: life cycle assessment (LCA) (14), green (22), green-washing (23)

Questions:

1. Goleman uses the idea of Indra’s net as a metaphor for the nature of industrial processes (15). What do you think of this metaphor? What other words or ways would you use to describe industrial processes? Is any one metaphor sufficient?
2. How might considering “green” a verb, as Goleman suggests, rather than an adjective, change the way you or other people behave (28)?
3. What is the difference between cradle-to-cradle and cradle-to-grave thinking? Why might that be an important shift in thinking?
4. How does Goleman make the case that green is not either/or?
5. Do you agree that today’s standards for greenness will be seen as “eco-myopia” tomorrow (26)?
6. If you could write new standards for “green,” what would you include?

Activities:

1. Draw a picture of a glass jar (or other consumer product) and illustrate as many inputs and outputs involved in its production you can find. Find ads for “green” or “eco-friendly” products. What product characteristics seem to genuinely support the health of the environment? What characteristics might be green-washin (23)?

Chapter 3 — What We Don’t Know

Synopsis: Goleman describes how the structure of human brains, which evolved to detect certain kinds of threats, makes it difficult for us to see and react to current problems that affect our health and environment.

Term: vital lie (35)

• discussion questions & suggested activities (continued)

Questions:

1. What examples does Goleman give of how what we don't know can hurt us?
2. How does the way our brains are designed explain why people often seem unconcerned about threats like global warming, cancer-causing chemicals, and the like (32-34)?
3. Goleman calls actions that may seem good, like recycling bottles and cans, a "vital lie" (35). What does he mean? Do you agree?
4. In what way are we both victims and villains of ecological problems?
5. Knowing how the human brain focuses on noticeable differences, what steps do you think we as a society can take to boost awareness and concern about threats like global warming or cancer?

Activities:

1. Make a list of "vital lies" supporting our belief that what we don't know or can't see doesn't matter. Compare your list with other students in your class.
2. Develop a poll that asks others to rate their level of concern about some issues—such as global warming, cancer-causing chemicals, and the destruction of coral reefs—that are imperceptible to humans.

Chapter 4 — Ecological Intelligence

Synopsis: Goleman explains that while nature operates at different scales—from the micro to the global—humans tend to perceive only one scale at a time, a tendency that underlies many of our current environmental problems. He suggests that through collective information gathering and processing, ecological intelligence will help us move beyond this limitation.

Terms: sustainability (42), ecological intelligence (43), neocortex (46), niche (46), swarm intelligence (50)

Questions:

1. To define sustainability, Goleman gives the example of a hamlet in Tibet that has survived in its own ecosystem for 1000 years (41-42). How would you define sustainability?
2. Goleman defines ecological intelligence on page 43. How does this definition compare to the one in Chapter 1 (3)?
3. We no longer live as close to nature as our ancestors did (45), so we do not require some of the skills they needed to survive. What survival skills do we need that our ancestors may not have needed?
4. Goleman points out that natural systems operate at different scales, but people tend to perceive only one or two at any given time (47). What challenges does this present for us when we look to solve problems like global warming?
5. Goleman suggests that our brains need to develop an early warning system for toxic chemicals and other dangers (47). How does he propose doing this? Is this realistic or likely to happen?
6. What are some examples of shared or collective intelligence already in place (48)? What are the advantages of this approach to navigating and solving problems?
7. What do you think of Goleman's three swarm intelligence rules (50)? Are there any you would add or change?

• discussion questions & suggested activities (continued)

8. Describe a situation in your community where people seemed to follow Goleman's swarm rules to make a change.

Activities:

1. Choose an indigenous culture and research ways in which its members attuned their lifestyle to their natural surroundings.
 2. List 10 everyday things you did today (like getting to campus, recycling something, walking your dog, or buying food) and identify their possible impacts on the Earth.
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Chapter 5 — The New Math

Synopsis: Goleman points out that measures like carbon footprint only provide part of the story about a product's impacts and that they can themselves cause unintended consequences. He suggests that we need to understand an item's impact in three different realms: the geosphere, the biosphere, and the sociosphere.

Terms: carbon footprint (53), unintended consequence (56), geosphere (57), biosphere (57), sociosphere (57), resource burden (59)

Questions:

1. The carbon footprint has become a common way to compare the impacts of certain products or activities. What factors are included and excluded in the carbon footprint (53)? Is it an adequate measure?
2. What examples of unintended consequences does Goleman give (56, 57)?
3. Can you think of any examples on our campus where actions or events had unintended consequences?
4. What different information would you glean about a product if you looked at it in terms of its impacts on the geosphere, versus the biosphere, versus the sociosphere (57)?
5. Goleman asks how knowing the actual impacts of our purchases would transform our world (70). How would you answer that question?

Activities:

1. Choose a product, trace its life cycle, and write a report—including illustrations showing what you learned.
 2. Research an eco-tourism site and identify the likely trade-offs for the local population.
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Chapter 6 — The Information Gap

Synopsis: In this chapter, Goleman examines the inequality between companies and consumers in terms of key data about particular products that might influence shopping decisions. He points out that even eco-labeling programs do not fully address this "information asymmetry." He suggests that radical transparency would enable consumers to learn the full story about the true impacts of their purchases.

Terms: information asymmetry (73), greenwashing (74), satisfice (78)

• discussion questions & suggested activities (continued)

Questions:

1. Cost is often the only information we have for comparing two different products (72). How is it a problem if we make purchasing decisions based solely on price?
2. What are the causes and consequences of information asymmetry between sellers/producers and consumers (73)?
3. What are the long-term consequences of greenwashing (74)?
4. Goleman describes the ancient Roman olive oil containers that listed the source of the oil (75). What information is generally available to consumers of various products today? Do you think consumers want more or less information than they already have access to?
5. The term “satisfice” is defined as a combination of “satisfy” and “suffice” (78). Can you think of a recent decision in which you “satisfied” rather than put forth the effort to truly understand the complexity of a decision? What are the advantages and drawbacks of “satisficing”?
6. How do you think radical transparency might change consumer products and behavior?

Activities:

1. At home or in a store, look for claims on products that are irrelevant or unsupported (like a “chemical-free” pesticide or “energy efficient” lamps). Take a picture of each claim using a cell phone or camera, and write a brief explanation of how it may be misleading.
2. Interview five friends about situations in which they “satisfied” or chose “adequate” when making a purchasing decision. Videotape the interviews, if possible, and show them in class.

Chapter 7 — Full Disclosure

Synopsis: In this chapter, Goleman describes a cutting-edge tool that he says will help bring radical transparency to the marketplace. Known as GoodGuide, this tool summarizes a wide range of life cycle information about products and rates them according to their environmental, health, and social impacts, thus allowing shoppers to make more informed choices at the point of sale. He suggests that such tools will help people be more mindful and pay closer attention to the impacts of their purchases.

Terms: mindful (96), freegan (97)

Questions:

1. How does consumer desire for new styles and low cost affect the health and safety of workers?
2. Do you think information about products, as presented in the GoodGuide, can truly change consumer behavior (91)? Why or why not?
3. What issues would matter most to you in an analysis of a product, as presented in the Good Guide (92)?
4. Marketing expert Baba Shiv says that most decisions about products are based on emotion (100). Do you agree or disagree? Can you think of an example where that may or may not be the case?
5. Can you imagine other uses for a tool like GoodGuide beyond informing purchasing decisions?

• discussion questions & suggested activities (continued)

Activities:

1. Visit www.goodguide.com. Choose three products that you use on a regular basis and see how each rates in comparison to other brands of the same item. Will its rating influence what you buy next time? Why or why not?
2. Read about GoodGuide's methodology on the website www.goodguide.com. After seeing what the ratings entail, write the pros and cons of accepting this statement from Dara O'Rourke, the founder of GoodGuide: "No one person can know all this at one time, but together we can bring the best knowledge on product and company impacts to people in a form that lets them make better choices" (84).

Chapter 8 — Twitter and Buzz

Synopsis: Using as an example a situation in which British college students protested a bank's fee changes, Goleman shows how the multiplier effect of people sharing knowledge can diminish information asymmetry. He examines how social networking and other technologies can accelerate both buzz and whistle-blowing.

Terms: open-source (108), whistle-blowing (108), buzz (110)

Questions:

1. How does technology like cell phones, Facebook, Twitter, and so on diminish information asymmetry between producer and consumer (102)? Can you think of an example where you saw this happen?
2. In the book, the Walmart executive says that something like the GoodGuide provides too much information and that people don't want to know so much, while Dara O'Rourke of GoodGuide says he and others do want access to more information (103,104). Who do you think is right, and why do you think so?
3. How important do you think it is that a rating system such as GoodGuide or the Delhaize nutritional rating system make transparent the data and assumptions behind their ratings (105)?
4. What do you think of a "sustainable Wikipedia" that would tell you back stories of everyday products? What would be the benefits and drawbacks of such a source? Would you use it?
5. Goleman says that radical transparency must be authoritative, impartial, and comprehensive (108). Do you think these qualities are important? Which do you think is most important? What additional qualities might you include in the list?

Activities:

1. Goleman describes radical transparency as potentially revolutionary. Dara O'Rourke, the founder of GoodGuide, thinks teens may find GoodGuide to be a way to impress their friends. Create a cartoon that incorporates or compares these two viewpoints.
2. Find an example of a company that has either initiated or been forced by the social networking buzz to divulge information about its products or services. Write a summary of the product or service and changes made to it, what the company now divulges about it, and the reason(s) the company gives for choosing to be more transparent about this particular product or service.

• discussion questions & suggested activities (continued)

Chapter 9 — Fair and Square

Synopsis: Goleman describes different sets of research on how ecological and ethical labeling can affect consumer behavior. While cost is often a factor, a rating system can influence consumers when it gives clear information about which choices are better and when “more virtuous” decisions are as accessible as others.

Terms: eco-virtue (118)

Questions:

1. In the studies Goleman cites, what relationship do consumers perceive between product price and quality or “eco-virtue” (118-119)? How does this perception affect consumer decisions?
2. Would you be willing to pay more for a product made in fair, safe, and healthy working conditions? How much (in dollars) would it be worth to you to know that this is true?
3. Do you agree with Goleman’s claim (125) that young people are more motivated to embrace and act on information about ecological decisions than older generations? If so, why do you think that might be true? What evidence can you cite either way?

Activities:

1. Choose two brands of the same product that differ significantly in price, such as two brands of paper towels or two brands of ketchup. Find an ad for each and notice the positive qualities touted by the ad and packaging. Develop a short list of criteria for judging the two products against each other. How do they compare? Why might some one buy the more expensive brand?
2. Choose a personal product that you use and find it on the GoodGuide (www.goodguide.com) and Skin Deep (www.cosmeticsdatabase.com) websites. Compare the ratings and what each company says about the product. Make a Venn diagram that identifies similarities and differences in the ways each company judges a product.

Chapter 10 — The Virtuous Cycle

Synopsis: In this chapter, Goleman describes a variety of situations in which consumers put pressure on companies to improve their products, without the government mandating the changes. He calls this a “virtuous cycle,” when product information influences shoppers’ choices and leads to businesses changing their products.

Terms: trans fat (127), virtuous cycle (134)

Questions:

1. What examples does Goleman give to make the case that providing information to consumers can directly affect product safety and health?
2. Can you name a situation in which you switched or stopped buying a product or brand because of something you learned about it? What did you learn, and why did that make you change?
3. Do you agree with industrial ecologist Gregory Norris’s statement that “saying it doesn’t matter what I buy is like saying it doesn’t matter who I vote for” (140)?
4. What factors do you consider when you are making a purchase at the grocery store or mall? In general, what factors are most important to you?

• discussion questions & suggested activities (continued)

Activities:

1. Visit a grocery store, restaurant-filled street, or mall. Photograph examples of ways in which we are encouraged to eat unhealthy food or to eat more food. Also photograph any environmental or health claims made where food is sold.
2. Write a short position paper: Do you think public pressure on companies to improve products and services is sufficient, or do you think government should play a role in establishing and enforcing standards in some industries?

Chapter 11 — The Chemical Stew

Synopsis: Goleman explores some of the health effects of chemicals used in today's products. He points out that while most consumers assume that the chemicals used today must be deemed safe, the EPA in fact grandfathered some 62,000 industrial chemicals in 1972, most of which have not been tested for health effects. He explains how many different diseases seem to be caused by chronic inflammation from exposure to one or more chemicals.

Terms: diacetyl (142), toxic (144), epigenetics (150), chronic inflammation (151), precautionary principle (152)

Questions:

1. Why do individuals, companies, and even governments sometimes act more quickly on issues like the health effects of products than something like global warming (142)?
2. In cases like Wayne Watson ("Mr. Popcorn"), whom do you think should be held responsible for keeping us safe from harmful products and chemicals?
3. What do you think Goleman means when he says "the body is an ecosystem of sorts" (147)? How might looking at the human body as an ecosystem affect how we as a society behave?
4. How do Europe and the United States approach toxicity differently (152)?
5. Examine the statement by the Procter & Gamble toxicologist who said, "We'd never put a chemical in the marketplace if it wasn't safe (154)." What incentives does a company have to either put an unsafe product on the market or withhold it?
6. Goleman describes a study by a scientist who found that exposure to more than one compound at a time can produce diseases that exposure to a single compound does not. What does this finding tell us about how we should be thinking about and studying possible toxins (154)?

Activities:

1. Choose one potentially harmful food, household item, or other product. Find out why it is a threat to human health and what people can do to decrease risk of exposure. Write a short blog about it to inform others.
2. What is the "precautionary principle" (152)? Write a position paper either supporting or disputing the value of this principle as policy.

• discussion questions & suggested activities (continued)

Chapter 12 — The Amygdala Goes Shopping

Synopsis: In this chapter, Goleman describes some of the attributes of the human brain that affect our consumer choices. For example, the amygdala scans the environment for hazards and triggers a reaction when it senses danger; a perception that something is inedible or poison can cause a physical reaction we call disgust. He suggests that transparency can prompt these strong consumer reactions to products and thereby accelerate market change.

Terms: amygdala (161), cognitive (166)

Questions:

1. How does the amygdala—the danger-averse part of our brain—affect what products we use and buy?
2. In what other ways do human brain functions affect everyday decisions (like the brain's focus on short-term over long-term, the effect of disgust, and so on)?
3. How does the viewpoint of industry towards toxicity differ from that of consumers (170)?
4. Almost everything in our environment can cause harm at some level (172). Who should decide what levels are “safe”?
5. Do you agree with Goleman that the prudent or cautionary thing to do is to protect human health and avoid any potentially harmful substance (174)? What are the costs of doing that? Are they worth it? How would transparency help?

Activities:

1. Write a poem or song lyrics describing how the amygdala influences people's decisions (teens in particular).
2. Find examples of advertisers applying the power of “shopper disgust” or persuading consumers to buy something expensive by showing an even more expensive item.

Chapter 13 — Tough Questions

Synopsis: Goleman outlines several questions that company executives would need to consider before responding to problems like a newly-discovered toxicity in a product or changing consumer preferences. He also describes case studies in which large corporations, including Coca-Cola and Procter & Gamble, consciously changed their strategies to become more sustainable. He shows the benefits these companies have seen in embracing more than just the bottom line.

Terms: bottom line (181), Friedman economics (181)

Questions:

1. What are the advantages and disadvantages of both short- and long-term thinking about environmental issues?
2. Many companies assume that adopting more ecological tactics will be costly, unnecessary, and bad politics. What examples does Goleman give of environmentally responsible actions saving money and improving the company's reputation (182)?
3. How does strengthening the direct relationship between the shopper and the producer or grower—as Eosta is trying to do (191)—help both?
4. This chapter could serve as a primer for business on the benefits of valuing more than the financial bottom line (181). What are the possible benefits to the company, the environment, and society when they expand their notion of the bottomline?

• discussion questions & suggested activities (continued)

5. Is there anything else we as individuals or as a society can do to help companies consider more than just their own bottomline?

Activities:

1. Create a decision tree with questions like those listed on pages 178-181 to analyze a specific problem on campus or at home.
2. Work with another student to create an imaginary company that views social responsibility—not just the bottom line—as part of its mission. Develop a PowerPoint presentation to convince investors that your mission is a good idea.

Chapter 14 — The Perpetual Upgrade

Synopsis: In this chapter, Goleman points out that institutional buyers for universities, hospitals, and other organizations have started adding environmental and social mandates to their purchasing recommendations. When institutions like these are able to calculate the environmental and social benefits of switching products through radical transparency, their impact is even greater. He describes how decisions like these can cause a ripple effect and lead to a perpetual upgrading of products to those that are better for health, society, and the environment.

Terms: supply chain (200), biodegradable (215)

Questions:

1. Dara O'Rourke, the creator of GoodGuide, says that “there’s no market feedback as yet to reward doing good” (207). How might Earthster, GoodGuide, and other transparency tools help reward good?
2. Goleman points out that cereal boxes are bigger than they need to be to hold the cereal because of the mechanical process of filling them (208). What kind of impacts does this seemingly small discrepancy have when you consider the millions of cereal boxes sold each year?
3. How do tools like Walmart’s energy and packaging ratings encourage innovation (209)? How does this approach compare with a completely transparent approach like Earthster’s?
4. How does Goleman see the “perpetual upgrade” making a difference both in companies’ behaviors and their bottom lines?
5. Goleman examines waste as more than material waste, but also energy, water, and soil waste. How does waste affect both producers and consumers?
6. Goleman asks whether humans can support the earth’s carrying capacity rather than threaten it (215). What do you think? Can we? If so, how?

Activities:

1. Find a website that calculates your ecological footprint. Enter your data, print out your footprint, and identify at least three painless ways you can reduce it.
2. Check out Walmart’s sustainability pages on its website at <http://walmartstores.com/Sustainability>. Create a comic book or use another medium to tell the story (real or imagined) of how Walmart has tried to change its image from an often-disparaged big box store to a model green business.

• discussion questions & suggested activities (continued)

Chapter 15 — Second Thoughts

Synopsis: Goleman points out some of the pitfalls of transparency efforts, including poor execution, misguided good intentions, and difficulties of verification. He also suggests that gradual improvements may be “too little, too late” if we don’t look at the underlying causes of problems, including our consumer mentality and the overall amount of stuff we consume.

Terms: tipping point (220), triple bottom line (225), bottom-up (228), top-down (229)

Questions:

1. Do you agree with the Mondi executive that at the end of the day, consumers consider cost and performance—not environmental excellence—when deciding on a product (219)?
2. What are some of the problems Goleman cites for companies actually trying to make more environmentally sustainable choices (222-226)?
3. What are the drawbacks of top-down approaches to change? How can businesses or society include bottom-up participation (228-229)?
4. Is radical transparency enough to truly make a difference, or is it perhaps too little, too late?
5. Goleman points out that radical transparency may be missing some important elements for change (231-232). What are other important considerations that are not included?

Activities:

1. Currently, the success of a business is based on its financial performance. Create a report card or rubric for businesses that expands the criteria on which success is based.
2. John Ehrenfeld, the executive director of the International Society for Industrial Ecology, says: “The global industrial system is broken; the environment would rather not have us here at all. Reducing unsustainability, though critical, does not create sustainability (232).” Write a letter from Mother Earth to humans, elaborating on Ehrenfeld’s point of view.

Chapter 16 — Doing Well by Doing Good

Synopsis: In this final chapter, Goleman describes how radical transparency would provide an incentive for companies to do good, fostering care of rather than harm toward “the commons.” He conveys the hope that such transparency would encourage the free market to work in the public interest, not solely for profit, and help to heal humans’ relationship with Earth.

Questions:

1. What would be the impacts (both positive and negative) of taxing companies for the harm their products inflict ?
2. What do you think of the idea to create a Green Net National Product to determine the economy’s robustness?
3. The book ends with a quote by South African naturalist Ian McCallum: “The Earth doesn’t need healing. We do” (247). What do you think he means by this? Do you agree with him?

• discussion questions & suggested activities (continued)

Activities:

1. Define the term “the tragedy of the commons” and give one example—not mentioned in the book—of this dilemma as it is being played out in our lifetime.
2. Make a poster that informs others of Ian McCallum’s notion that “the Earth doesn’t need healing. We do” (247).

• other titles of interest

Barnes, Peter. *Capitalism 3.0: A Guide to Reclaiming the Commons*. San Francisco, CA: Barrett-Koehler, 2006.

McCallum, Ian. *Ecological Intelligence: Rediscovering Ourselves in the Environment*. Golden, CO: Fulcrum Publishing, 2009.

Ryan, John C. and Alan Thein Durning. *Stuff: The Secret Lives of Everyday Things*. Seattle, WA: Northwest Environment Watch, 1997.

Senge, Peter, et al. *The Necessary Revolution: How Individuals and Organizations are Working Together to Create a Sustainable World*. New York: Doubleday Currency, 2008.

Stone, Michael K. and Center for Ecoliteracy. *Smart by Nature: Schooling for Sustainability*. Berkeley, CA: University of California Press, 2009.

• about this guide’s writer

The Center for Ecoliteracy is a leader in the green schooling movement. Smart by Nature™, the Center’s framework and services for schooling for sustainability, is based on two decades of work with schools and organizations in more than 400 communities across the United States and numerous other countries.

The Center is best known for its pioneering work with school gardens, school lunches, and the integration of ecological principles and sustainability into school curricula. It also offers books, teaching guides, seminars, a sustainability leadership academy, keynote presentations, and consulting services.

This guide was written by Leslie Comnes, M.A., an education specialist who has written on science and education programs for numerous national organizations, and Carolie Sly, Ph.D., the Center’s education programs director who has coauthored several books and articles. Daniel Goleman, author of *Ecological Intelligence*, wrote the foreword to the Center’s most recent acclaimed book, *Smart by Nature: Schooling for Sustainability*. Learn more about the Center for Ecoliteracy at: www.ecoliteracy.org.

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Cook, Karin. **What Girls Learn**
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