

Conservation

Classroom Resources

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“ Even gadget-loving consumers are often made uneasy by the speed with which we acquire and abandon complicated, expensive possessions. ”



Heirloom Technology

By David Owen

We buy and abandon costly, tantalizing, resource-intensive gadgets with remarkable speed. One way to break free is to rethink not only an object's design but also how we use it. Example? Hand-crank your cell phone.

SUMMARY QUESTIONS

[worksheet available online](#)

1. Why wasn't Griffith's eyeglass lens production invention a solution to the problem of getting sight correction to impoverished countries? (answer: He was addressing the technical side of the problem, which already had a good solution. His innovation didn't address the inadequate access to medical care to test eyes and write prescriptions.)
2. What is the difficulty associated with the timing of energy generation from renewable resources? What is the limiting technology? (answer: Renewable power sources are intermittent, and energy storage is the limiting technology.) What are some examples of the current technology available for overcoming this issue (e.g. how do French companies store energy from their nuclear power plants)? What is the problem with this technology? (answer: The French are using excess

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BUILD YOUR OWN GLOSSARY

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energy to pump water uphill, then use it to generate hydroelectric power later. This system isn't 100% efficient and needs to be scaled up.)

DISCUSSION QUESTIONS

[worksheet available online](#)

1. Compare and contrast the benefits and drawbacks of "heirloom technologies" versus "built-to-trash" technologies.
2. How does the concept of "heirloom technology" play into the Reduce-Reuse-Recycle paradigm of green living? Should the three R's be stated in a cascading order (in other words, is one more important than another?) rather than in a triangular loop?
3. What is your opinion of the author's statements, "In one way or another we all depend economically on the continued fickleness of everyone else. It's one thing to say we feel overwhelmed by our junk; it would be quite another to demand societal changes whose direct results would include a steep decline in economic activity, leading to reductions in our own income, comfort, and convenience."
4. What is your reaction to the author's statements, "If you couldn't buy electronic gadgets, but had to rent them from Apple, Apple would make sure that your (hand-cranked) iPhone lasted for decades, and it would be a very long time before you were offered an opportunity to abandon your iPad for an iPad 2... How appealing would "green" seem if it meant less innovation and fewer cool gadgets—not more?"

ADVANCED ACTIVITIES

1. **Heirloom Technology in Your Life:** Look around your home and make a list of up to ten heirloom technologies (high-quality, low-energy) that you find, as well as up to ten high-energy, high-disposal rate technologies. Are there any alternatives to the heirloom technologies that you could consider? (ADDITION: visit a local re-purposing store to see what's there. What products stand the test of time?) Which items do you most often trash before their lifetime is up? Cell phone? Ballpoint pens?
2. **Economic Analysis of Lifetime Costs:** Choose one non-heirloom technology in your life that has an heirloom technology substitute (a cheap watch, ballpoint pen, cell phone, microwave, coffee maker, plastic flower pot, plastic

Further Reading:

The Conundrum by David Owen

water bottle, cheap furniture, disposable diapers, plastic containers, disposable soap bottles, cheap vacuum cleaners, disposable dishes, etc.) Calculate the cost for that item over your lifetime given an estimated rate of replacement. Then calculate the lifetime cost of an equivalent heirloom technology given an estimated replacement rate. Does one technology require additional time or effort to use? How could you factor that into your calculations? Does that influence which one you decide to buy? (ADDITION: research the cost, energy, resource consumption, and pollution of manufacturing both items. Does that influence your decision of which to buy?)

- 3. Design a Buyer's Guide:** Choose a type of appliance (e.g. washer-drier, oven, espresso machine, toaster, vacuum, refrigerator, etc.). What categories would you include in a buyers guide (e.g. cost, lifetime cost, expected lifetime, energy efficiency, energy consumption, repair accessibility/costs, environmental impact of manufacturing, etc.)? Draft one.
- 4. Design a New Infographic for Green Living:** Think of nutrition diagrams' shift from food squares to food triangle to more modern breakdowns (below). Could you create a new "Reduce-Reuse-Recycle" diagram incorporating heirloom technology concepts?

