[The Washington Post]

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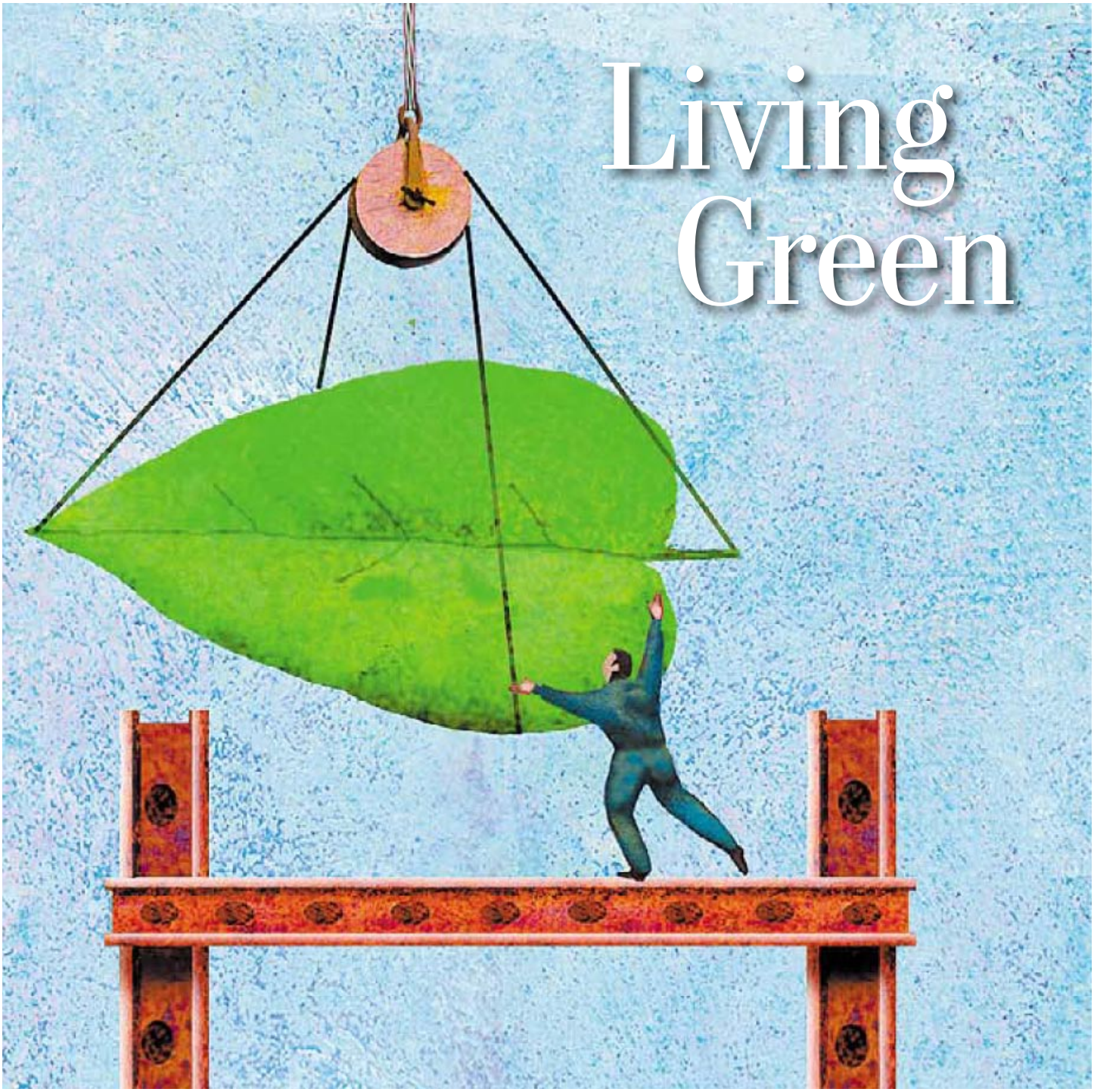
Living Green



BY WARREN GEBERT FOR THE WASHINGTON POST

INSIDE

March 12, 2008

A Word About Living Green

Our earliest communities were centered on the village green. More recently communities established neighborhood parks and recycling centers. Now our focus has shifted to green roofs, common green standards and saving the environment.

New terms and expanded definitions for familiar words have entered our vocabulary. There are green designs, green airports and greenwashing. Hybrids are eco-chic. To receive LEED certification, one uses renewable materials and avoids VOCs.

Learning how to Go Green has become easier. There are calendars with daily tips, Web sites to explore, special features in magazines, new TV shows, and articles in *The Washington Post*.

Every section of *The Post* provides information about living green. In the A section, you may find news stories, science articles and editorial commentary on different aspects of the topic. The Metro section may list meetings near you, cover the most recent school to go green or highlight what a local group is doing. The Health and Food sections provide diets and recipes, an introduction to new foods and the latest research on your body's interaction with the environment. The Home section provides gardening and eco-friendly home care hints and products. The Style section profiles personalities involved in the green movement and reviews programs covering a range of contemporary concerns. The Business section includes investment news, emerging markets and local business response to green standards.

Lesson: Ecology, economics, nutrition and aesthetics interplay in the personal decision to live green.

Level: Low to high
Subjects: Ecology, Economics, Health
Related Activity: English, Journalism

NIE Online Guide
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An Integrated Curriculum For The Washington Post Newspaper In Education Program

Living Green

Making informed choices about living green requires knowledge. The following activities can be used with articles in this guide and in your daily *Washington Post*.

Develop Vocabulary

The "Go Green Word Find" contains twenty words to locate. Students are then asked to use the words in a paragraph about living green. You may add the step of defining all terms or those terms with which they are uncertain of the "green" meaning.

Vocabulary in the sidebar "In the Know" appear in many recent articles. Review the definitions with students before they read the articles in this guide and *The Post*.

Ask students to underline or record new words as they read the articles in this guide and *The Post*. From this list they are to select 10 words to create a personal vocabulary quiz with matching, multiple choice definitions, and fill-in-the-blank sentences.

Take a Quiz

Give students "Green Scene: Are You a Master of Mulch? A Scholar of Sweet Box? Prove It." Ten questions excerpted from a 20-question quiz will give students an opportunity to show what they know about gardening. The complete quiz was published February 2, 2008, in the Green Scene column (F3).

If you have not covered this material in class, the quiz questions could be turned into a team Internet hunt for the correct answers. This would give your students practice in determining the best sources to locate accurate information. Add the requirement that they list the URL and title of the Web site used. You could also limit the search to previous Green Scene columns. All topics were covered in previous columns.

Answers to the quiz can be found on page 6 in this guide.

Discuss Options of the Faithful

"The Faithfully Green Try a 'Carbon Fast' for Lent" (Sunday Source, Feb. 24, 2008) covers some options that leaders of faith communities are recommending. Before reading this short article, you may need to discuss definitions within this context: "Lent," "fast," "abstain," "curb," "denomination," "sustainability," "mandate" and "carbon-neutral."

Questions that you might discuss include:

- What are some of the options for observing Lent that religious leaders are giving their members?
- Name some of the ways the information is made available. (Weekly tip sheets, blogs, newsletters, Web sites)
- What does the term "sustainability gospel" mean?
- How can a place of worship be more eco-friendly?
- Of the five "carbon fast's Lent tips" listed, which do you think you could observe?
- Do you know of other groups that are encouraging its members to "go green"?

Meet an Eco-Coach

Provide students with copies of "Learn From a Green-Living Guru." This Sunday Source article from December 2007 could be used in a career unit, an economics unit, a lesson on the influence of global

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In the Know

Eco-friendly: *Goods made with ecology and the environment in mind; not harmful to the environment*

Go Green: *Conscious action to curb harmful effects on the environment through consumer habits, behavior and lifestyle*

Green: *Environmentally sound or beneficial*

Green roof: *A roof that is partially or completely covered with vegetation*

Greenwashing: *Making a superficial commitment to sustainable concerns for better public relations with the consumer or public*

Native plants: *Those that are indigenous to a particular region and have evolved with the wildlife there*

Organic: *A product solely made from plants or insects; produced with methods to reduce pollution from air, soil and water; raised or conducted without use of drugs, hormones or synthetic chemicals; healthful and close to nature*

Post-consumer: *Material that was used by a consumer, then recycled; diverted from a landfill by recycling*

Recycle: *Treat or process used or waste materials in order to make suitable for reuse*

Repurpose: *Use a thing or material for a purpose not originally intended*

Sustainable: *Supporting our planet's needs by conserving our water, air, soil, forests, lakes and oceans.*

CONTINUED FROM PAGE 3

warming on everyday life and environmental awareness or as part of a biology class study of the green movement in the 21st century.

Before reading the profile, ask students what they think an eco-coach would do. Questions that may be discussed after reading include:

- What events took place in 2006 to influence Novacovici to redefine her consultant business?
- In what ways does one's motivation influence one's actions and willingness to continue a new activity or attitude?
- What is an "eco-audit"? What might an eco-audit of your home include?
- Are there economic as well as personal or ecological reasons to be more planet-friendly?
- Write a one-paragraph job description for an eco-coach.

Be an Entrepreneur

What began as natural products and native plants are now eco-friendly and sustainable products. A small group of consumers has grown large enough for Home Depot to designate 2,500 products in its stores as Eco Options. Economics and business students could use the fast growing green categories as a study of supply and demand, incentives and profit and entrepreneurship.

Give students "A Bumper Crop of Organic Items for the Green Consumer" and "Green Is Cleaning Up" (both from the Home section) to read about both small businesses and the large corporations that have entered the green marketplace. Discussion questions may include:

- Give examples of new jobs and products that have resulted from consumers' interest in going green.
- How do the personal stories of individuals help readers understand the impact of consumers on businesses? Does this anecdotal evidence make students believe they could also begin a business?
- What would be the job description of a vice president of environmental innovation?
- What market trends are evident from reading these articles?
- In what ways are larger competitors a concern to small businesses? Beneficial?
- Select one of the companies mentioned in the articles. How is it an example of supply and demand?
- Which business owner provides an example of incentives? Explain your answer.

Give students "Greed in the Name of Green." This March 5, 2008, Style section article has a different tone than the other two articles about green products and going green. This article could be used to discuss audience, purpose and tone as well as what living green really means to an individual.

- Review the data that is provided. What do the numbers relate? What purpose do they serve in the article?
- How does diction influence the meaning and tone? Discuss word choice such as "congregation," "Church of the Holy Organic," "purge our closets," "runneth over" and "devout green consumer."
- What rhetorical advantage is gained by selecting "100 percent Organic Solana Swaddle Wrap" as a product example?

CONTINUED ON PAGE 5

Trees

A green canopy and shade, cleaner air quality and less polluted runoff. Learn about these benefits and more that trees provide in the D.C. Metropolitan area.

www.virginia.edu/blandy
Blandy Experimental Farm
Located 60 miles west of D.C., home of the State Arboretum of Virginia, open daily, free. Schedules, training programs and K-12 material on the Web.

www.caseytrees.org/
Casey Trees
Use the interactive Tree Map of D.C. and benefits calculator, locate a tree-planting ceremony near you, and learn how to be a citizen forester

www.fairfaxreleaf.org/
Fairfax ReLeaf
Events and newsletter about efforts to conserve and restore Northern Virginia's native trees on public commons land

www.dnr.state.md.us/forests/treemendous/
Tree-Mendous Maryland
Volunteer opportunities and where to purchase trees for healthy communities and a cleaner Chesapeake Bay

www.usna.usda.gov/
U.S. National Arboretum
Events, research and educational opportunities. Check out "Tough Streetwise Urban Trees."

www.abundantforests.org/
Abundant Forests
Ideas for activities and projects with the goal to renew, reuse and respect forests.

CONTINUED FROM PAGE 4

- How does comparison and contrast enhance the position taken by the writer?
- In what ways does the writer present a different perspective on living green?
- Summarize the writer's message in a paragraph.

Turn Dirt Into Cash

Let's take a look at the green economy and how your students might enter it. After reading the previous three articles, group students. Give each group a different item; these could include wire coat hangers, glue sticks, snack food in individual plastic wrappers, pencils, needle and thread, metal lunch box, or a baggie containing dirt.

Ask students: How can you take common household items and transform them into green products? As you approach this task think of your end product and answer the following questions:

1. Does it accomplish the same task or purpose?
2. Is it made of eco-friendly, renewable or recycled material? If not, what materials should we use? Repurpose?
3. How expensive would it be to manufacture or handcraft 100 of these?
4. At what price would you sell the item?
5. Why is your household item an improvement over the original item?

Students could either build a prototype of the product or draw a picture of it with the materials needed to produce it identified.

Each group might also be asked to create a *Washington Post* display ad for the new product.

Think Green Design

Younger students may be given the KidsPost article "Greener by the Block." Discuss the ways the Sidwell Friends Middle School in D.C. and Suitland Elementary in Prince George's County, Md., are green schools. Does their school have any green design features?

What is their school doing to be eco-friendly? In what ways could they improve on what they are doing? After brainstorming, write a letter to the principal and PTSA with your ideas. Who should be commended? What could be improved?

Give students "Saving the Earth Inside the Office," a Washington Business section article. Alejandro Lazo focuses on the Discovery Communications building in Silver Spring, Md. As it planned the launch of its Planet Green network, it looked at itself.

The article and infographic provide insight into how an existing building can be transformed to meet green standards, especially with the right incentives. Study questions are provided in this guide. See "Saving the Earth Inside the Office — Questions for Discussion."

Read "Is Green Building Budding?" This article focuses on residential buildings. Study questions and research suggestions are provided ("Home, Green Home").

Spread the Word

Students might work in teams to research, write and design a centerfold spread for your student newspaper. Topics would include:

- Green redesign of your school building or campus
- Eating and living green
- How to be eco-chic

CONTINUED ON PAGE 6

Read About Trees

Plant trees. They give us two of the most crucial elements for our survival: oxygen and books.

— A. Whitney Brown

Cutler, Catherine, Tony Russell, Martin Walters
The Illustrated Encyclopedia of Trees of the World
Lorenz Books (2007)
Very good illustrations, photographs and maps; entries provide enough information to identify familiar and unusual trees

Preston, Richard
The Wild Trees
Random House (2007)
Take a walk into the tops of the tallest trees on Earth. A Book World review states: "Preston makes us feel the forest undergrowth tearing at the explorers' clothes, the wind swaying the "Treeboats" they sleep in, the bees stinging their faces as they make epic ascents of behemoths."

Suess, Dr.
The Lorax
Random House Books for Young Readers (1971)
A place where Truffula Trees grow, a villain aims to profit and the fuzzy yellow Lorax speaks for the trees "for the trees have no tongues"

Tudge, Colin
The Tree: A Natural History of What Trees Are, How They Live and Why They Matter
Three Rivers Press (paperback, 2007)
British biologist and science writer explains how biologists identify trees, how trees have evolved and survived, and why trees are a major influence in the time of global warming

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CONTINUED FROM PAGE 5

- Scavenger hunt for eco-friendly products, activities and designs in your school

Another option would be to prepare a podcast on living green for your school's Web site. Interview administrators, the school nurse, cooks and custodians as well as students who lead service clubs. Do you have student or faculty members who compose music? Include the composition.

Use a display case to present one of the above topics. Include quotations from people in your school community. Begin a green conversation that might result in a healthier and eco-friendly environment.

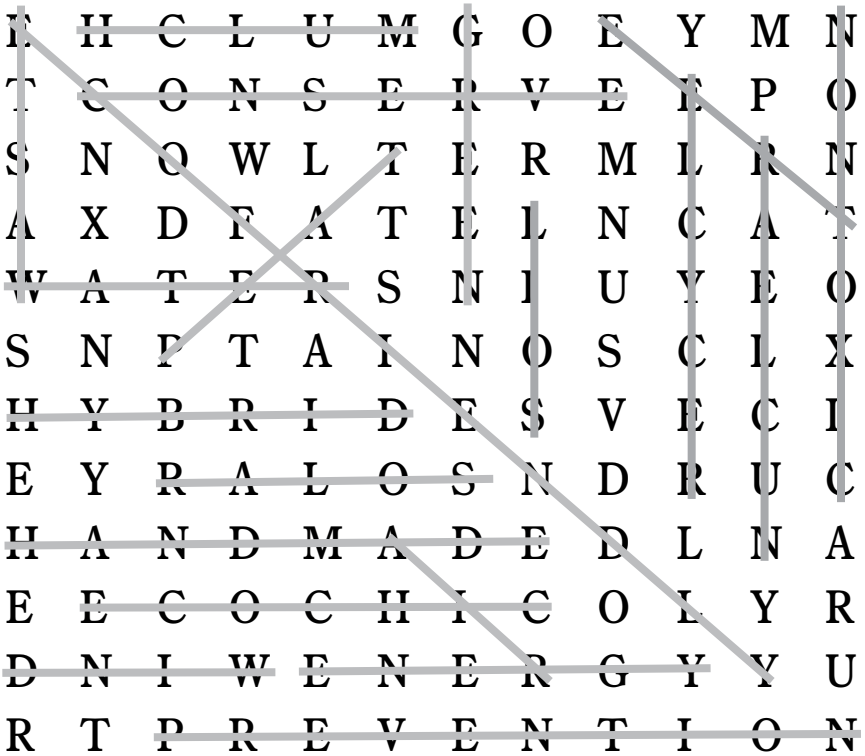
Research

A study of the new terms and definitions that have entered our vocabulary could provide an interesting look at how language evolves. For example, begin with the etymology of "organic" and its first use. Find examples of its use in 19th and 20th centuries and its current use in "organic farming," "organic products," "organic living." Who determines if a product may be labeled "organic"?

Students may be grouped to do research on alternative energy (solar, wind, nuclear), energy efficiency and building materials. Terms would include: adobe, brown power, green power, passive solar design, and straw bale construction.

Focus on methods and approaches to recycle, reduce litter, collect water, and create a green roof or xeriscape. After research, write a plan to apply the best practices to help your school community live green.

Word Find answers



Answers: Green Scene Quiz

RATE YOUR KNOWLEDGE

If you had all correct, you could host your own garden show. One to two wrong makes you the neighborhood horticultural guru. Three to four incorrect answers, you just need more gardening experience. Five or more wrong: Call an expert.

And Now the Answers

1. b: Any fertilizer must be in liquid form to be absorbed through the cell walls of tiny feeder roots. This occurs by osmosis. For fertilizer to work, it must have water. A fungus that grows on feeder roots, called mycorrhiza, helps roots absorb nutrients.
2. a: Photosynthesis is the process of sunshine acting on the carbon dioxide and water absorbed by green leaves to manufacture the sugars and starches plants need to grow.
3. c: Healthy plants have a natural resistance to pests. But without proper conditions — good soil, moisture, drainage, air circulation and sunlight — insects and diseases meet little resistance.
4. b: Plants can self-propagate by many means. Ferns are one example of a nonflowering plant that propagates by means of spores and prothallia, or growth from the parent plant.
5. c: The best-known green roof is probably the 2,500- to 3,000-year-old Hanging Gardens of Babylon.
6. a: Native does not mean that a plant will grow anywhere in a region. It depends on soil, moisture, pH, light and other requirements, as with all plants.
7. c: Foods will compost, but they also attract rodents.
8. c: The most common food grasses are rice, wheat and corn.
9. b: Hophornbeam is a native plant that has proved to be an excellent street tree with an interesting flower that resembles hops — the reason for its name.
10. c: Soil or some growing medium is necessary only after seeds sprout. They have enough food to get started. Fertilizer is not necessary until plants are growing.

Name _____ **Date** _____

Go Green Word Find

Twenty words related to living green are found in the box. Read left to right, right to left, up, down and diagonally to locate them.

Air	Green	Nuclear	Solar
Conserve	Handmade	Peat	Tree
Eco-chic	Hybrid	Prevention	Waste
Eco-friendly	Mulch	Recycle	Water
Energy	Non-toxic	Soil	Wind

E H C L U M G O E Y M N
T C O N S E R V E E P O
S N O W L T E R M L R N
A X D F A T E L N C A T
W A T E R S N I U Y E O
S N P T A I N O S C L X
H Y B R I D E S V E C I
E Y R A L O S N D R U C
H A N D M A D E D L N A
E E C O C H I C O L Y R
D N I W E N E R G Y Y U
R T P R E V E N T I O N

After you have found all twenty words, write a paragraph about living in an eco-friendly manner using six of the terms. For a bonus point, locate two more words and tell how they relate to living green.

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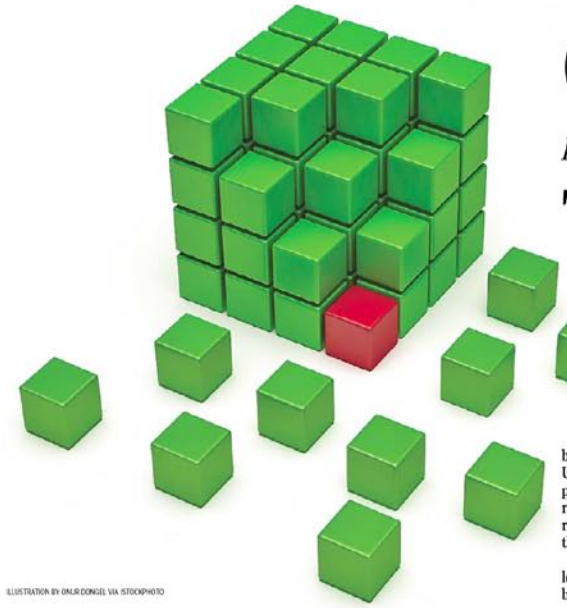

ILLUSTRATION BY ONUR DONGEL VIA ISTOCKPHOTO

Greener by the Block

From the Garden to the Roof, Schools Find Ways to Help the Environment

There are plenty of things you can do to help the environment. A great place to start is at school. Across the region, students and school officials are tackling projects big and small to help our planet. KidsPost's **Margaret Webb Pressler** highlights some of their efforts.

Green Buildings

More and more schools are being designed and used in ways that are friendly to the environment. These so-called green schools use less energy, cost less to run and are good for students.

The newly renovated Sidwell Friends Middle School in the District has been awarded the highest rating by the U.S. Green Building Council for having a positive impact on the environment — a rare honor. Soon the school will treat and re-use its wastewater, saving hundreds of thousands of gallons of water per year.

The recycled water from sinks and toilets, which can't be used for drinking, will be colored blue, "so we know it's recycled, just in case it gets into the water fountains — not that it would," joked Emily Bernstein, 14, a Sidwell student and building tour guide. Water fountains will still use fresh city water.

Sidwell students are studying the building itself in science classes to help them learn first-hand the positive impact of green buildings. It's affecting how they view the world around them. "If you see a [building] being torn down, you think, 'They're going to fill up a whole landfill with that,'" said Matthew Malone, 13.

In Prince George's County, Suitland Elementary has been so successful that another green school is being planned, in Laurel, for the 2008-09 school year.

At Suitland, a garden courtyard collects and uses rainwater; the roof is angled away from the sun to keep it cool; and skylights and tall windows let in lots of natural light.

"You don't have to switch on the light switch all the time," said Rupert McCave, the county official guiding these projects.

Green schools tend to be sunnier and more inviting than older buildings. In fact, a study done in Washington state showed that students at green schools performed better and were absent less.

Green Actions

Kathy Molina, a sixth-grade science teacher at H-B Woodlawn in Arlington, teaches students about the environment. This year they taught *her* a thing or two.

Every year, Molina takes her kids to a nearby stream to monitor the environment and water quality. Then she encourages students to do a community activity for extra credit. "This one just happened to be the real deal this year," she said.

Ibby Han, 12, was bothered by the trash in the stream, especially the old cellphones the kids found. She did some research and learned that when electronic items such as phones, TVs and computers get thrown in landfills, chemicals seep into the ground and nearby water. "A lot of people don't know how to recycle electronics," she said.

Ibby and her classmates organized an electronics recycling drive in March for the school community. The kids collected 433 items in one day and gave them to the county for proper disposal. "I was so very much impressed that sixth-graders could take on solving such a big problem," Molina said.

The class won an award from Staples, and the office products chain asked the kids to help it organize an electronics recycling event of its own. County officials are now looking at ways to make it easier for residents to safely get rid of old electronics.

It was rewarding for the kids, but it wasn't easy.

"We all worked really hard, and it came together," Ibby said. "But I was pretty relieved that it was over."

COURTESY SHELLY HAN

Grace Evans, above left, and Ibby Han are shown hauling a computer monitor.

H-B Woodlawn
Students organized an electronics recycling drive. Here's how:

- They coordinated with Arlington County officials and mailed sign-up forms to Woodlawn families.
- They made a list of items to be picked up at homes and mapped routes for drivers (parents).
- They collected the old electronics and loaded everything into a large trash bin they had ordered. The material was then delivered to the county for recycling.

BY JAMES A. PARCELL FOR THE WASHINGTON POST

Suitland Elementary School: Using water collected in a rain barrel, teacher LiAne Coates helps students, from left, Kevin Jackson, Star Chase, Charis Miller and Jasmine Holt tend to the school's garden.

An A for Effort

Environmentally friendly ideas at some Fairfax schools:

- At Waste-Free Lunch Day at **West Springfield Elementary**, kids brought their lunches — using lunch boxes, real silverware and reusable containers.
- **Spring Hill Elementary** created an outdoor classroom, with benches and native plants, where kids can study habitat, conservation and wildlife.
- The Ecology Club distributed energy-efficient fluorescent light bulbs at **Franklin Middle**.
- At **Chantilly High**, new rules save paper by limiting fliers to 10 locations.
- **Hunters Woods Elementary** School for the Arts and Sciences collects Halloween pumpkins and puts them in compost bins.
- Classes at **Bailey's Elementary** School for the Arts and Sciences are competing to collect aluminum cans.

BY PETER AARON — PHOTO/POST/ESTO

More Ideas

Learn about the trees and flowers where you live and how you can reuse products to help the environment at *www.abundantforests.org* (click on "Plant It Forward"). There are things to make (including a scavenger-hunt photo frame) and tips on what other kids and families are doing to be green.

FOREST IMAGE COURTESY ABUNDANTFORESTS.ORG

Name _____ Date _____

GREEN SCENE

Joel M. Lerner

Are You a Master of Mulch?

A Scholar of Sweet Box? Prove It.

You are asked to test your knowledge of gardening. We selected questions from a longer quiz written by Joel M. Lerner, president of Environmental Design in Capitol View Park, Md. The original quiz appeared in the Green Scene column.

Place the letter of the correct answer on the line before the question.

_____1. How do plants obtain nutrients from granular fertilizer?

a. Absorb the granules through roots and leaves
b. Absorb the nutrients as liquid by osmosis through mycorrhiza and "feeder" roots
c. Absorb granules, as crystals, through large surface roots

____ 2. What chemical process does a plant use to make food?

a. Photosynthesis
b. Respiration reduction
c. Symbiotic relationship with soil

_____3. What is often the reason that insects and diseases attack plants?

a. Healthy and vigorous growth makes them good subjects
b. The plants go dormant in winter
c. Poor site conditions stress the plants

_____4. Do all plants have flowers?

Fern knowledge might help.

a. Yes. Flowers are necessary for all plants to procreate.
b. No. Flowers are produced by only a part of the plant kingdom.
c. No. Plants in heavy shade don't produce flowers.

_____5. When were green roofs first built?

a. In the early 20th century, when Frank Lloyd Wright designed one in Chicago
b. In the15th century, the end of the medieval period when gardens could safely move outside European castle walls
c. 2,500 to 3,000 years ago in Rome, and in the Tigris and Euphrates river valleys

_____ 6. How do you know where to install a native plant?

a. Locate according to cultural requirements: moist or dry, sun or shade.
b. Plant where it will be most aesthetically pleasing.
c. Install only in the region where it's deemed native.

_____ 7. Compost should never contain which of these organic substances, especially in urban areas?

a. Shredded paper, seeds and seed hulls
b. Chicken guano, horse manure and coyote urine
c. Cooked food, meat and diseased plant material

_____ 8. What plant family feeds about one-third of the world's population?

a. Legume
b. Cabbage
c. Grass

_____ 9. What has proven an excellent tree to line city streets?

a. Goldenchain tree (Laburnum X wateri)
b. Hophornbeam (Ostrya virginiana)
c. Katsuratree (Cercidiphyllum japonicum)

____ 10. What four conditions do seeds need to sprout?

a. Light, heat, fertilizer, water
b. Light, heat, soil, water
c. Light, heat, air, water

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ECO WISE

The Faithfully Green Try a 'Carbon Fast' for Lent

• *Originally Published February 24, 2008*

Penance for Lent traditionally has meant abstaining from meat or forsaking chocolates. In light of climate change, however, two Church of England leaders are calling on congregants to curb their energy consumption instead.

Bishops Richard Chartres of London and James Jones of Liverpool recently partnered with the U.K.-based nonprofit organization Tearfund (Jones is a vice president) to promote a Lenten "carbon fast," a plan that prescribes a household energy-saving tip for each of the period's 40 days. Carbon-cutting reflects the Christian value of caring for the poor, the logic goes, because coastal and drought-prone third-world regions are disproportionately affected by global warming.

Though we know of no other denominations that have formally recommended going green for Lent, the idea is catching on: A blog (http://greenlent.blogspot.com) is devoted to the concept, and locally, Greater Washington Interfaith Power and Light, a nonprofit organization that works with area congregations to spread the sustainability gospel, is promoting a Lenten carbon fast in the D.C. area, offering pledges and tip sheets for distribution at worship services and church events.

"It's a biblical mandate that we take care of our planet," says Robin Simpson, pastor of D.C.'s Luther Place Memorial Church. "Lent is a great place to start; I would encourage that the idea continue all year." Luther Place, a Lutheran congregation and Washington Interfaith Network member, established an Eco-Stewards program in 2006 that includes alternative transportation and carpooling programs, weekly newsletter tips for congregants and initiatives for the church building itself, such as phasing out paper plates, placing insulating film over stained-glass windows, seeking out climate-appropriate landscaping and purchasing fair-trade, sustainably harvested palms for Palm Sunday.

Increasingly, religious leaders are coming around to the green way of thinking: The Presbyterian Church asked its members to become carbon-neutral in 2006; the Vatican hosted a climate change conference last year; the Church of England initiated "Shrinking the Footprint," a plan to reduce its carbon usage by 60 percent. And Call to Action, a group founded last year, seeks to make global warming a top political issue for evangelicals; its leaders include the Rev. Joel C. Hunter, president of the Christian Coalition of America, and the Rev. Richard Cizik, vice president for government relations of the National Association of Evangelicals. Some political analysts speculate that "eco-evangelicals" could be a crucial voting bloc in this fall's elections.

Here are a few of the carbon fast's Lent tips that are easy to implement, no matter your faith:

• Check tire pressure; cars with tires that aren't properly inflated burn more fuel.

• Cover cooking pans with lids to make food heat faster, and boil water in a kettle rather than in an open pot.

• Fit your hot-water heater with an insulating jacket.

• Reuse an item you would have otherwise discarded, such as a glass jar or ice-cream container.

• Have a silent Sunday: no cellphones, TV or cars.

For more tips, visit *http://www.tearfund.org* and *http://www.gwipl.org/lent.asp*.

— Eviana Hartman

BY MICHAEL MCCLOSEY

Check your tire pressure. Underinflated tires burn more fuel.

An Integrated Curriculum For The Washington Post Newspaper In Education Program

ECO WISE

Learn From a Green-Living Guru

• *Originally Published December 2, 2007*

Those new to the green scene who are in need of savvy advice have someone to turn to: Anca Novacovici, a District-based consultant who draws up planet-friendly strategies for residents and businesses nationwide via her company, Eco-Coach (http://www.eco-coach.com, 571-275-7700).

Novacovici, 33, says she shapes the most environmentally challenged into conservation champions. Her goals? To prevent harm to the environment, of course, but also to drill her clients in personal empowerment. Replacing one incandescent light bulb with a compact fluorescent, for instance, will keep a half-ton of carbon dioxide — a major contributor to global warming — out of the atmosphere over the life of the bulb.

"Even though it's easy to say [climate change is] coming up so quickly on us, a little step by everyone is what's going to make a big difference," she says.

Eco-Coach was created in February 2006, when Novacovici, then an independent management consultant, started teaching green-living workshops part time. Novacovici wanted to apply her environmental passion — instilled while growing up as a tomboy on her grandmother's farm in Romania — to her work.

That year's spate of natural disasters, Al Gore's documentary *An Inconvenient Truth* and a surge in environmental consciousness allowed Novacovici to go full time in October 2006. She charges $200 to $300 for an audit, depending on the size of the home.

Before a coaching visit, Novacovici asks her clients to think about their motivation. Is it cutting energy costs or their carbon footprint? She then tours their home and evaluates, room by room, how to meet those objectives. Afterward, she draws up an "eco-audit," a list of needed changes with a note about their degrees of difficulty. The clients check back with Novacovici at regular intervals or whenever they need further coaching.

Betsy Singer recruited Novacovici in July to lower energy costs and reduce toxic chemicals in her three-bedroom Columbia home. Singer had adopted some green habits, but she wanted "an expert opinion on what I was already doing and ideas for the future," she says.

BY JUANA ARIAS FOR THE WASHINGTON POST

For $200 to $300, Anca Novacovici will do an "eco-audit" of your home to help you meet your environmental goals.

Under Novacovici's tutelage, Singer bought a programmable thermostat, installed Energy Star appliances and unplugged devices when not in use — actions that have kept her energy bill down, she says.

Novacovici practices what she preaches. She zips around town in Zeus, her nickname for her sky blue 2005 Toyota Prius, and instead of a coach's whistle, she wears a Q-Link pendant around her neck that is supposed to help deflect potentially harmful electromagnetic fields. She even sweats out D.C. summers without air conditioning.

But this conservation pro is the first to admit that becoming green isn't easy. "You can get info overload and [say], 'Everything I'm doing is wrong,' " Novacovici says. "It's figuring out things within your reach that you can do."

Start with the painless first, she advises: Switch to reusable cups and silverware at work, or install water-saving filters on your shower

Name _____ **Date** _____

Newsprint, New Words, New Ideas

The Washington Post is committed to using as much recycled newsprint and other recycled materials as it can. Eighty percent of the newsprint you hold in your hands daily comes from post-consumer content.

Employees of *The Post* recycle waste newsprint, used ink, printing plates and other production material. *Post* offices have designated containers for white paper, colored paper and cardboard. In addition, there are the usual recycling containers for cans and bottles.

The Post encourages you to recycle your newspaper. Who takes care of recycling in your school? If you take the newspaper home, do you repurpose it or recycle it?

Don't forget to recycle the plastic home delivery bags and Sunday insert wrappers. Take those to the recycling bins at nearby grocery stores.

The Washington Post through its actions does its best to be an eco-friendly business in the Metropolitan area. It also does this by informing its readers of the latest news, innovations, business ventures and approaches to living green.

Read The Washington Post for five days. Reporters and photographers cover many topics and people, here in the D.C. Metropolitan area and around the globe. You are to focus on news about the environment and living green. How many articles can you find on these subjects? In how many sections of The Washington Post?

Clip each complete article so you are able to provide the following information:

Headline _____

Byline _____

Section _____ Date _____ Page(s) _____

On the review page, you have three sections to complete. Use these guidelines:

News
Provide a summary of the article. Include the Who, What, Where, When, How and Why whenever possible.

New Vocabulary
You are to include three new words you found in the article. One of the words may be a word you know that has a new meaning in this context.

New Idea
This is more than a statement of the idea. In this section, evaluate the concept, product or event. You may include the answers to some of these questions: Do you see this idea, research, event, product or action as beneficial, needed, harmful or exploitive? What do the individuals involved gain or lose? What additional information do you want to know?

Name _____ **Date** _____

Newsprint, New Words, New Ideas — My Review

Headline _____

Byline _____

Section _____ Date _____ Page(s) _____

The News

New Vocabular

1. Word _____

Sentence in which found _____

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2. Word _____

Sentence in which found _____

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3. Word _____

Sentence in which found _____

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New Idea

An Integrated Curriculum For The Washington Post Newspaper In Education Program

A Bumper Crop of Organic Items For the Green Consumer

By Adrian Higgins
Washington Post Staff Writer

• *Originally Published January 17, 2008*

BALTIMORE

If you are looking for a disciple of organic gardening, you would be hard-pressed to find a more fervent true believer than Jeff Otto. Otto created a company called East Coast Organics after a snowstorm took out his greenhouse nursery in the 1990s.

For the past 10 years, he has been pushing natural fertilizers, soil stimulants and growing mixes, products made with everything from renewable coconut fiber to seaweed. His eyes light up when he talks about getting Whole Foods to carry his tubs of worm dung (black gold for gardeners, full of plant nutrients).

Otto, bearded and with dreadlocks below his waist, is on one level a throwback to the hippie age. On another, he is the future of home gardening in the 21st century. "The retail is ready," he said. "The green consumer is predominating right now."

I came across Otto at last week's Mid-Atlantic Nursery Trade Show, a regional event at the Baltimore Convention Center. It featured a conspicuous chunk of exhibitors thinking green.

Otto, who works from a warehouse in Baltimore, is an established exhibitor at the annual show who said he is seeing more orders than ever for his products from garden centers. "They're talking the language," he said. "I'm really blown away by the amount of response."

But as demand for eco-friendly products grows, Otto and other classic, small-time operators are seeing the marketplace increasingly defined by large corporations.

The most visible 800-pound gorilla is Scotts Miracle-Gro, which has launched a series of organic lawn and garden fertilizers and soil mixes. Monrovia, based in Azusa, Calif., and

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PHARM SOLUTIONS

Pharm Solutions sells a line of organic-based garden sprays to beat back weeds and insects.

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one of the nation's leading growers of nursery plants, will this year introduce a line of seven organic fertilizers and four soil mixes, made from plant and animal byproducts and suffused with beneficial fungi for root growth. The fertilizer packaging is compostable.

Henry Ortland, a spokesman for Monrovia, said the introduction is a natural progression for a company that has been developing organic mixes for its container-grown plants. One of the hurdles to the mass production of organics has been the high price of livestock feed, which is used in natural plant foods. But synthetic fertilizers are made from petroleum products, and with oil at $100 a barrel, the organic prices become competitive.

"Now you can have a product that's competitive, beneficial and reduces our dependence on oil," said Ortland, who is based in Atlanta.

Small enterprises still define much of the organic trade. Elsewhere on the show floor, Ernie Reigel was displaying spray bottles of brightly colored liquids developed by a company in Port Townsend, Wash., called Pharm Solutions. Among the products was an oil spray (used to smother leaf-eating pests) made from soybean oil, instead of the conventional paraffin; a mite spray made from cottonseed oil; and a rose spray made from peppermint oil said to disorient aphids and other pests. Reigel also was taking orders for a concentrated acetic acid spray, four times stronger than household vinegar, to kill weeds. "They fly off the shelf," said a garden center owner placing an order. "They can't get enough."

The firm was founded by a software company executive named Susan Lewis who left her corporate world to launch what was essentially a line of homemade remedies that she tested on her own gardens over 20 years. She started the business in 2004 and since then has seen sales grow 75 percent a year, she said.

Consumer demand for green products is so strong that Lewis predicts multinational companies that make household cleaning supplies will expand into gardening products. She expects to survive and thrive, however. "We are just beginning," Lewis said.

This year's show also featured a remarkable number of nurseries that specialize in native plants. The bulk of their business remains in supplying highway departments, commercial developers and others required to restore disturbed land with indigenous plantings. Increasingly, however, the growers also supply consumers who equate native plants and wildflowers with gardens that are environmentally sustainable and attract desirable insects and birds.

When Michael Hollins founded Sylva Native Nursery and Seed Co., now in Glen Rock, Pa., in 1988, he counted just three firms specializing in native plant propagation. In his earlier years at the show, "most people would just pass our booth," he said. Last week, there was a steady stream of visitors to his display.

Otto has seen big companies moving into organics change the game. He said he would work with a product manufacturer to develop a fertilizer, for example, and a larger distributor with its own fleet of trucks and network of garden centers would want the product and Otto would lose out. He has sought to protect himself by manufacturing his own brand of soil mixes and fertilizers.

The arrival of competitive behemoths such as Scotts Miracle-Gro is not necessarily bad from Otto's perspective. Their well-funded marketing efforts have increased the public's appetite for organics. "Manufacturers are capable of producing items and bringing to market products they couldn't do a few years ago because there wasn't consumer awareness to justify it," he said.

In a way, the organic mania in gardening mirrors what's happening with food. With official government organic certification and consumer interest, organic foods are being produced on an industrial scale. This has drawn criticism from purists who decry, among other things, the cost to the environment of shipping organic lettuce or lemons more than 2,000 miles to urban markets.

There are certain basic principles of organic gardening: the avoidance of synthetic pesticides and fertilizers, efficient use of resources such as water, tolerance of a certain level of pests and diseases, and, especially, the idea that by looking after the health of the soil, the plants will take care of themselves.

Another essential notion is that you are doing all you can to make it self-sustaining, by recycling waste into compost and using it to feed the soil.

But all that also requires time and attention. The troubling irony, as Hollins noted, is that the next generation of gardeners consists of busy 30-somethings with a penchant for green living but no perceived time to spend in the garden, especially if they have children.

"It helps to think you're green," he said, "but how do you influence the culture of young people to experience it?"

It will be worth watching over the next decade to see whether this green revolution is real and whether all these new products are used to supplement the work of the organic gardener, or employed instead to nurture the conscience.

BY JULIA EWAN—THE WASHINGTON POST

Organic tomatoes.

An Integrated Curriculum For The Washington Post Newspaper In Education Program

Green Is Cleaning Up

Hot Market Makes 'Eco-Friendly' a Household Word

By Jura Koncius
Washington Post Staff Writer

• *Originally Published April 19, 2007*

You know the eco-revolution has turned a corner when lemons start challenging Lysol.

In the cleaning aisle at the neighborhood grocery, small companies that for years have marketed environmentally friendly dish detergents and floor cleaners are being joined by the industry giants. Even Procter & Gamble and Unilever are selling sustainability in smaller bottles that use less plastic.

This week, retailing giant Home Depot rolled out Eco Options, a designation for 2,500 products in its stores — including cleaning supplies such as biodegradable glass cleaners and water-saving washing machines — to help consumers identify eco-sensitive choices.

Cleaning products are among the fastest-growing green categories, according to Ron Jarvis, Home Depot's vice president of environmental innovation. "They used to be twice the cost and half the benefits," he says. "Consumers will buy green if it does everything a standard product does and has less impact on the environment."

Mia Gallina, owner of the Green Mop housekeeping service (www.thegreenmop.com) in Arlington, has seen her young company thrive by relying on purely green cleaning agents — mostly the lemons, baking soda and vinegar her Philippine mother used.

"I started as a green company in 2003 and never deviated," says Gallina, 36, who came to America to attend graduate school. Today she has 18 employees and more than 100 customers. "My customers at first are skeptical that their houses can be really clean without using lots of chemicals, but then they see results. Lots of my clients have kids or pets or allergies or compromised immune systems. Plus they care about the environment."

Minneapolis entrepreneur Monica Nassif started Caldrea, an upscale line of green cleaning products, in 2000. She shunned harsh chemicals and added fragrances taken from nature as her alternative to mass-market brands. Her dish soaps and furniture cream sold well in specialty stores, and soon she added private-label cleaning collections in yuzu jasmine and spiced chestnut for Williams-Sonoma. In 2001 her company created the more moderately priced Mrs. Meyer's Clean Day line, which is now carried by nearly 4,000 grocery and hardware stores.

BY LEN SPODEN FOR THE WASHINGTON POST

Mia Gallina, owner of the eco-friendly Green Mop.

Nassif says that although there were some earlier pioneers in green cleaning, the idea started taking hold in the 1970s, when natural cleaning products were turning up at neighborhood health-food co-ops. She sees the 1982 opening of natural foods supermarket Whole Foods in Austin as a major breakthrough. "Eventually, companies wanted to work on both performance and green properties, and that's when the consumer really embraced the concept," Nassif says.

Seventh Generation, which calls itself the nation's largest manufacturer of eco-friendly home and personal care products, launched in 1988. According to spokeswoman Chrystie Heimert, the Vermont-based company has experienced 40 percent growth annually over the past six years, with sales approaching $100 million. Its products have been on shelves in conventional supermarkets for about five years, showing the mainstreaming of what was once a fringe market.

The new cachet of green is prompting a certain amount of "green-washing": attractive earthy labels, eco-cheery names, naturally inspired (yet chemical-smelling) fragrances and precious few facts to back up claims that the product will slow global warming.

"Green is really a marketing term," says Brian Sansoni, vice president of the Soap and Detergent Association, which represents the $15 billion American household cleaning products industry, including some manufacturers whose products are plant-derived and free of petroleum derivatives. "The ecological nature of a product really involves the entire product:

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its packaging, manufacturing process and recycled content."

According to Sansoni, no federal standards govern the use of the term "natural" in relation to cleaning products. There are green guidelines dating to the 1990s, when the Federal Trade Commission issued general principles that marketers should not make misleading claims or overstate environmental benefits. Right now, Sansoni says, full ingredient listings on cleaning products are not required by law.

Many companies are looking for ways to educate consumers and help them evaluate green claims. Home Depot has created a labeling system for its Eco Options initiative identifying five performance areas: sustainable forestry, energy efficiency, clean water, clean air, healthy home.

Corporate Web sites are sources of information about the greening of cleaning products. Procter & Gamble, makers of Tide — the nation's top-selling laundry detergent — is adding smaller and lighter bottles that use less plastic and making cold-water formulas that conserve energy. All Small & Mighty, a concentrated liquid laundry detergent made by Unilever, requires only half the amount of plastic and corrugated cardboard to produce than the company's regular All liquid.

Jessica Boger and Gregory Rapawy, lawyers who live on Capitol Hill, have used Gallina's Green Mop services for a year. "It's the best housecleaning service I've ever had," Boger says. "I think most indoor environments are more polluted than the outside, and household cleaners are a big part of this."

BY JULIA EWAN—THE WASHINGTON POST

An Integrated Curriculum For The Washington Post Newspaper In Education Program

Greed in the Name of Green

To Worshipers of Consumption: Spending Won't Save the Earth

By Monica Hesse
Washington Post Staff Writer

• *Originally Published March 5, 2008*

Congregation of the Church of the Holy Organic, let us buy.

Let us buy Anna Sova Luxury Organics Turkish towels, 900 grams per square meter, $58 apiece. Let us buy the eco-friendly 600-thread-count bed sheets, milled in Switzerland with U.S. cotton, $570 for queen-size.

Let us purge our closets of those sinful synthetics, purify ourselves in the flame of the soy candle at the altar of the immaculate Earth Weave rug, and let us buy, buy, buy until we are whipped into a beatific froth of free-range fulfillment.

And let us never consider the other organic option — not buying — because the new green consumer wants to consume, to be more celadon than emerald, in the right color family but muted, without all the hand-me-down baby clothes and out-of-date carpet.

* * *

There was a time, and it was pre-Al Gore, when buying organic meant eggs and tomatoes, Whole Foods and farmer's markets. But in the past two years, the word has seeped out of the supermarket and into the home store, into the vacation industry, into the Wal-Mart. Almost three-quarters of the U.S. population buys organic products at least occasionally; between 2005 and 2006 the sale of organic non-food items increased 26 percent, from $744 million to $938 million, according to the Organic Trade Association.

Green is the new black, carbon is the new kryptonite, blah blah blah. The privileged eco-friendly American realized long ago that SUVs were Death Stars; now we see that our gas-only Lexus is one, too. Best replace it with a 2008 LS 600 hybrid for $104,000 (it actually gets fewer miles per gallon than some traditional makes, but, see, it is a hybrid). Accessorize the interior with an organic Sherpa car seat cover for only $119.99.

Consuming until you're squeaky green. It feels so good. It looks so good. It feels so good

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BY ROGER CHOUINARD FOR THE WASHINGTON POST

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to look so good, which is why conspicuousness is key.

These countertops are pressed paper.

Have I shown you my recycled platinum engagement ring?

In the past two weeks, our inbox has runneth over with giddily organic products: There's the 100 percent Organic Solana Swaddle Wrap, designed to replace baby blankets we did not even know were evil. There's the Valentine's pitch, "Forget Red — The color of love this season is Green!" It is advertising a water filter. There are the all-natural wasabi-covered goji berries, $30 for a snack six-pack, representing "a rare feat for wasabi."

There is the rebirth of *Organic Style* magazine, now only online but still as fashionable as ever, with a shopping section devoted to organic jewelry, organic pet bedding, organic garden decor, which apparently means more than "flowers" and "dirt."

When renowned environmentalist Paul Hawken is asked to comment on the new green consumer, he says, dryly, "The phrase itself is an oxymoron."

Oh ho?

"The good thing is people are waking up to the fact that we have a real [environmental] issue," says Hawken, who co-founded Smith & Hawken but left in 1992, before the $8,000 lawn became de rigueur. "But many of them are coming to the issue from being consumers. They buy a lot. They drive a lot."

They subscribe, in other words, to a destiny laid out by economist Victor Lebow, writing in 1955: "Our enormously productive economy demands that we make consumption our way of life, that we convert the buying and use of goods into rituals, that we seek our spiritual satisfaction . . . in consumption. . . . We need things consumed, burned up, replaced and discarded at an ever-accelerating rate."

The culture of obsolescence has become so deeply ingrained that it's practically reflexive. Holey sweaters get pitched, not mended. Laptops and cellphones get slimmer and shinier and smaller. We trade up every six months, and to make up for that, we buy and buy and hope we're buying the right other things, though sometimes we're not sure: When the Hartman Group, a market research firm, asked a group of devout green consumers what the USDA "organic" seal meant when placed on a product, 43 percent did not know. (The seal means that the product is at least 95 percent organic — no pesticides, no synthetic hormones, no sewage sludge, no irradiation, no cloning.)

Which is why, when wannabe environmentalists try to change purchasing habits without also altering their consumer mind-set, something gets lost in translation.

Polyester = bad. Solution? Throw out the old wardrobe and replace with natural fibers!

Linoleum = bad. Solution? Rip up the old floor and replace with cork!

Out with the old, in with the green.

It's done with the best of intentions, but all that replacing is problematic. That "bad" vinyl flooring? It was probably less destructive in your kitchens than in a landfill (unless, of course, it was a health hazard). Ditto for the older, but still wearable, clothes.

And that's not even getting into the carbon footprint left by a nice duvet's 5,000-mile flight from Switzerland. (Oh, all right: a one-way ticket from Zurich to Washington produces about 1,500 pounds of carbon dioxide.)

Really going green, Hawken says, "means having less. It does mean less. Everyone is saying, 'You don't have to change your lifestyle.' Well, yes, actually, you do."

But, but, but — buying green feels so guilt less, akin to the mentality that results in eating 14 of Whole Foods' two-bite cupcakes. Their first ingredient is cane sugar, but in a land of high-fructose panic, that's practically a health food, right? Have another.

BY ENVIRONMENTAL JUSTICE FOUNDATION VIA AP

Clean cotton T-shirt.

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ANNA SOVA LUXURY ORGANICS

Towels from Anna Sova Luxury Organics.

BY ESTER LEMBERGER—ANNA SOVA LUXURY ORGANICS

Soy wax candles.

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"There's a certain thrill, that you get to go out and replace everything," says Leslie Garrett, author of *The Virtuous Consumer,* a green shopping guide. "New bamboo T-shirts, new hemp curtains."

Garrett describes the conflicting feelings she and her husband experienced when trying to decide whether to toss an old living room sofa: "Our dog had chewed on it — there were only so many positions we could put it in" without the teeth marks showing. But it still fulfilled its basic role as a sofa: "We could still sit on it without falling through."

They could still make do. They could still, in this recession-wary economy, where everyone tries to cut back, subscribe to the crazy notion that conservation was about . . . conserving. Says Garrett, "The greenest products are the ones you don't buy."

There are exceptions. "Certain environmental issues trump other issues," Garrett says. "Preserving fossil fuels is more critical than landfill issues." If your furnace or fridge is functioning but inefficient, you can replace it guilt-free.

Ultimately, Garrett and her husband did buy a new sofa (from Ikea — Garrett appreciated the company's ban on carcinogens). But they made the purchase only after finding another home for their old couch — a college student on Craigslist was happy to take it off their hands.

The sofa example is what Josh Dorfman, host of the Seattle radio show *The Lazy Environmentalist,* considers to be a best-case scenario for the modern consumer. "Buying stuff is intrinsically wrapped up in our identities," Dorfman says. "You can't change that behavior. It's better to say, 'You're a crazy shopaholic. You're not going to stop being a crazy shopaholic. But if you're going to buy 50 pairs of jeans, buy them from this better place.' "

Then again, his show is called *The Lazy Environmentalist.*

Chip Giller, editor of enviro-blog *Grist.org,* has a less fatalistic view. He loves that Wal-Mart has developed an organic line. He applauds the efforts of the green consumer. "Two years ago, who would have thought we'd be in a place where terms like locavore and carbon footprint were household terms?" he says, viewing green consumption as a "gateway" to get more people involved in environmental issues. The important thing is for people to keep walking through the gate, toward the land of reduced air travel, energy-efficient homes and much less stuff: "We're not going to buy our way out of this."

* * *

Congregation of the Church of the Holy Organic, let us scrub our sins away with Seventh Generation cleaning products. Let us go ahead and bite into the locally grown apple, and let us replace our incandescent light bulbs with those dreadfully expensive fluorescents.

But yea, though we walk through the valley of the luxury organic, let us purchase no imported Sherpa car seat covers. Let us use the old one, even though it is ugly, because our toddler will spill Pom juice on the organic one just as quickly as on the hand-me-down.

Amen.

An Integrated Curriculum For The Washington Post Newspaper In Education Program

Saving the Earth Inside the Office

Discovery Turns Its Spotlight Inward

By Alejandro Lazo
Washington Post Staff Writer

• *Originally Published February 25, 2008*

Larry Laque, an executive with Silver Spring-based Discovery Communications, felt something amiss last year as his company began gearing up to announce a 24-hour television channel devoted to an all-green lifestyle.

Discovery would be preaching environmental awareness around the clock on its Planet Green network, but Laque thought the company was not doing all it could do to recycle, conserve energy and pollute less.

So when the company's chief executive, David Zaslav, requested ideas to help market the new channel, Laque proposed an initiative to "green" the two-building headquarters.

Walking through those two buildings last week, Laque pointed to several changes the company had made. Green-handled, low-flush toilets had been installed in every restroom. Three 400-gallon tanks in the garage stored rainwater to irrigate the company's lawn. And numerous unnecessary light bulbs had been removed, such as vending machine lights.

"I do believe it is a lot of little things that add up," Laque said last week, standing in one of several sun-bathed conference rooms. "We are a big part of the problem, but we are also a big part of the solution."

Discovery ultimately decided to seek the highest level of certification possible through the District-based U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program — platinum status. Only 62 buildings in the United States have won the designation. Two are in the Washington area: the Sidwell Friends School, on Wisconsin Avenue in Northwest D.C. and the Green Building Council's headquarters, on Massachusetts Avenue NW, just south of Dupont Circle.

The council's rating system has become the commercial real estate industry's benchmark for the design, construction and operation of environmentally friendly buildings. Businesses have rushed to embrace the system as fears of global climate change have become more prevalent and green credentials more marketable. Buildings are considered to be

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BY NIKKI KHAN—THE WASHINGTON POST

To reduce water usage and meet green building standards, Discovery installed three 400-gallon tanks to store rain water and use it to sprinkle the lawn.

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major energy consumers and big contributors of carbon emissions.

But even those who praise the LEED system say it is far from perfect. Developers get the same credit for taking steps that require relatively little effort as for those that require significant expenditures of time and money.

Nevertheless, the rapid acceptance of the Green Building Council's system has led to a transformation of the commercial real estate industry. New buildings are being erected to meet the new standards while real estate brokers seek accreditation from the council to better market existing office space to prospective clients. Green investment funds have been created by major real estate companies to pay for upgrades to existing buildings.

"I don't think any initiative that we have seen has been so quickly adopted and embraced in this business," said Mitchell N. Schear, president of Vornado/Charles E. Smith, a commercial real estate firm with a large presence in the Washington region.

The District and Montgomery County are among several local governments that have passed ordinances requiring that new construction adhere to the green standards.

The LEED system rates buildings by the number of points achieved in sustainable site development, water savings, energy efficiency, materials selection, indoor environmental quality and innovation.

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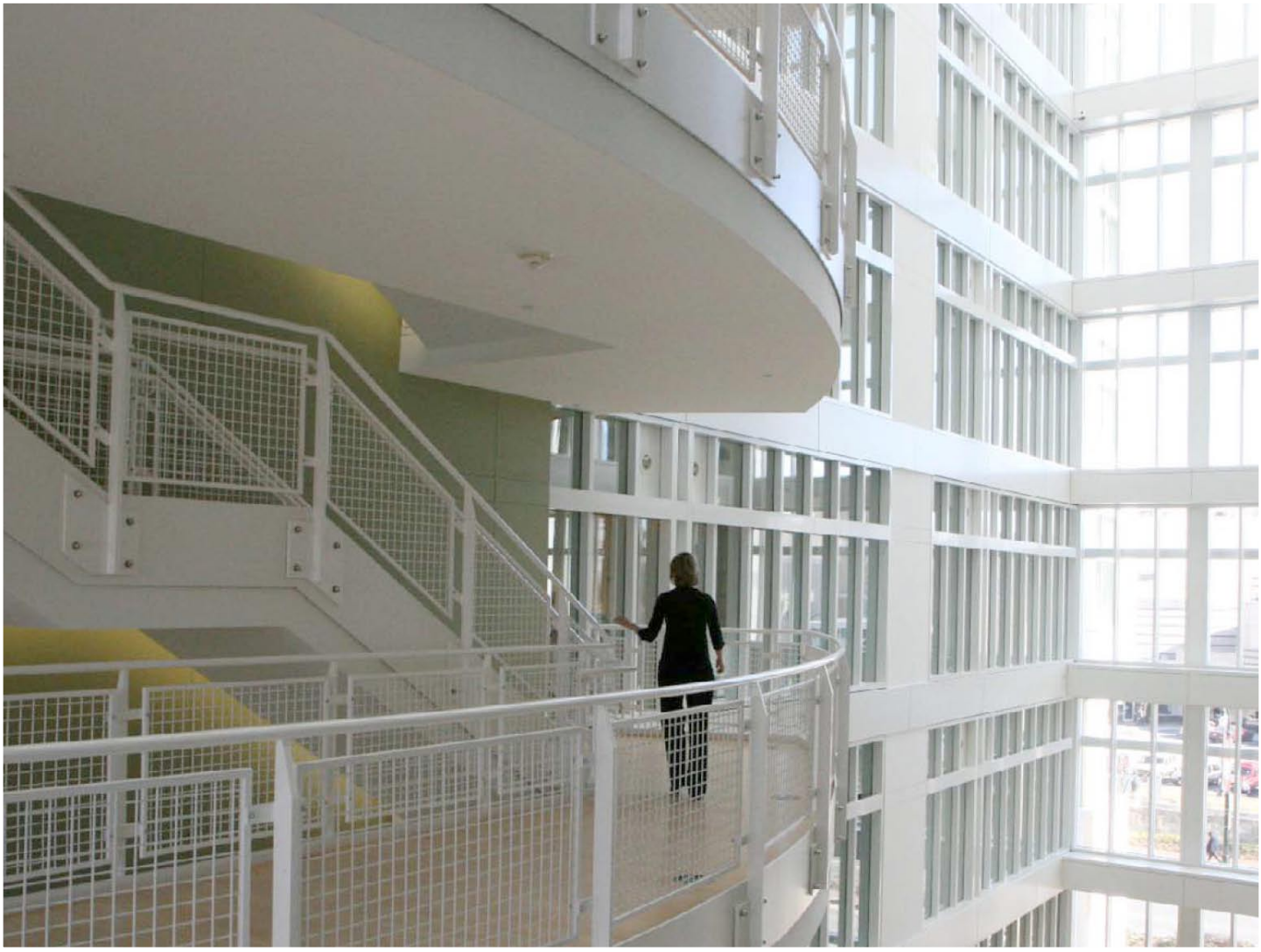

BY NIKKI KHAN—THE WASHINGTON POST

In preparing to launch a cable channel devoted to all things green, Discovery Communications retooled its Silver Spring headquarters to achieve new environmental standards for existing buildings.

BY NIKKI KHAN—THE WASHINGTON POST

Larry Laque, a Discovery Communications executive vice president for administration and technical facilities, led an effort to install energy-saving lights such as these and to remove light bulbs in places where they were not essential. The company pursued the highest energy-saving rating possible.

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The certification process is typically conducted via the Internet. To certify a project, a developer or owner must first register the building with the council.

Once the building is ready, the owner works through a checklist and submits documentation to back up the claims. A decision is typically rendered in one to three months. The average cost of certification is about $2,500.

Certain minimum requirements must be met to achieve certification. For example, pollution from construction sites must be controlled, certain minimum energy requirements must be met, recyclables must be properly collected and stored, and smoking must be prohibited.

To achieve LEED certification, a builder or developer must earn at least 26 points out of 69. Achieving higher designations such as silver, gold or platinum requires more points. While a builder or owner is free to choose which points are pursued, reductions in both energy and water usage are often necessary to advance. Discovery, for example, reduced its water usage by 25 percent and electricity consumption by 26 percent as it strove toward platinum certification, according to Laque.

Company representatives declined to disclose how much the green initiative cost because Discovery is in a quiet period before an initial public offering, expected this summer.

For new construction, the push to achieve top certifications can lead a developer to embrace a collaborative design process in which architects, engineers and contractors discuss from the onset what is desired, what is possible and what is economically feasible.

The early discussion is important, analysts and builders said, because one design change can often affect another. A building's orientation, for example, may affect what kind of windows are installed, which may then influence the type of lighting employed or what heating or air conditioning system may be required.

Such collaboration is intended to consider these trade-offs to create a more efficient building, developers and analysts said.

"Really that line between architecture and construction has become blurred," said Marnie Abramson, a principal with the Tower Cos. "You have to have a more comprehensive approach."

But some see flaws in the way points are doled out. Bill Oatey, owner of the Oatey Co., a Cleveland plumbing supplier and manufacturer, had one of his company's distribution centers certified under LEED. What perplexed him was that he earned one point for building the plant on a cleaned-up industrial brownfield site and one point for installing a bike rack on the premises.

But if the system is not perfect, for Discovery's Laque it at least allowed his company to set energy-saving goals, foster a team spirit and engage in ruthless self-evaluation. And as the year drew to a close, Laque's ambitions grew.

"We are going for platinum, we are going to do it," Laque recalled telling his staff. "We are going to do this, or we are going to die trying."

The Green Building Council awarded Laque and his team the platinum certification this year.

An Integrated Curriculum For The Washington Post Newspaper In Education Program

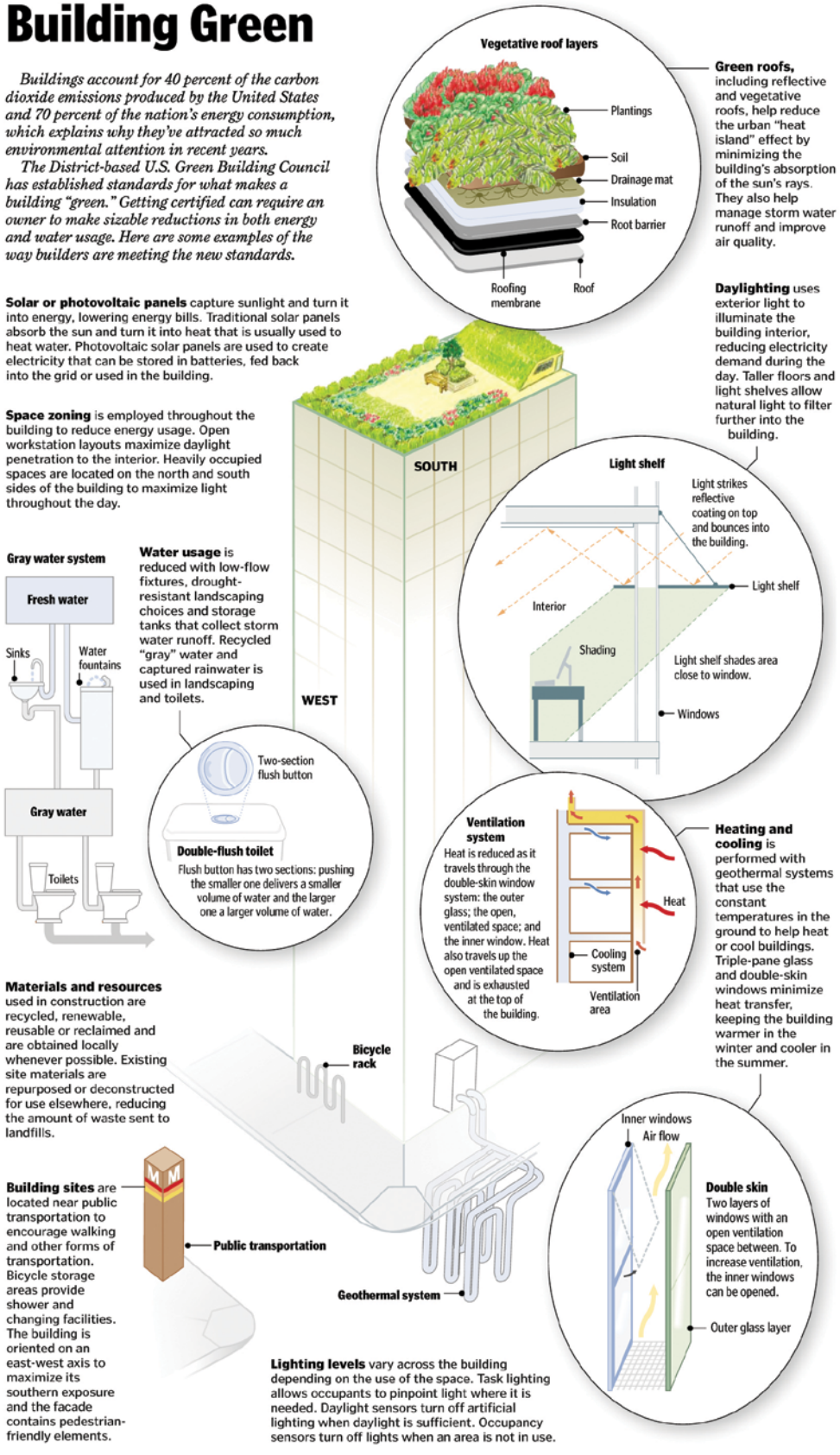
Building Green

Buildings account for 40 percent of the carbon dioxide emissions produced by the United States and 70 percent of the nation's energy consumption, which explains why they've attracted so much environmental attention in recent years.

The District-based U.S. Green Building Council has established standards for what makes a building "green." Getting certified can require an owner to make sizable reductions in both energy and water usage. Here are some examples of the way builders are meeting the new standards.

Solar or photovoltaic panels capture sunlight and turn it into energy, lowering energy bills. Traditional solar panels absorb the sun and turn it into heat that is usually used to heat water. Photovoltaic solar panels are used to create electricity that can be stored in batteries, fed back into the grid or used in the building.

Space zoning is employed throughout the building to reduce energy usage. Open workstation layouts maximize daylight penetration to the interior. Heavily occupied spaces are located on the north and south sides of the building to maximize light throughout the day.



SOURCES: U.S. Green Buildings Council; American Institute of Architects, Hickok Cole Architects; "Big & Green," published by the National Building Museum

Name _____ **Date** _____

Saving the Earth Inside the Office — Questions for Discussion

After reading "Saving the Earth Inside the Office" by Alijandro Lazo, answer the following questions. This Washington Post Washington Business section article and its accompanying informational graphic reports on Discovery Communications initiative to "green" its two-building headquarters. It also informs readers of LEED certification and its impact on the commercial real estate industry.

1. What incentive did Discovery Communications have to "green" its headquarters?

2. What does LEED stand for?

3. Why is LEED designation important?

4. The LEED system awards points in what categories?

5. Name three changes Discovery Communications made and how they meet LEED certification.

6. Why won't Discovery disclose the cost of its green initiative?

7. For what are green investment funds used?

8. When new construction begins, the collaboration of architects, engineers, contractors and owners should find agreement in order to receive LEED certification. What questions should they ask?

9. Name the three buildings in the Washington area to win LEED platinum status.

10. In what ways could the LEED standards be applied to our school building?

An Integrated Curriculum For The Washington Post Newspaper In Education Program

Is Green Building Budding?

Experts See a Gathering Momentum For Design Efficiency, Conservation

By Sandra Fleishman
Washington Post Staff Writer

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Friday marks 35 years since the first Earth Day. Have America's homes turned "green" yet?

Not quite. But the outlook for what is called "green building" — that is, designing homes or other structures to be energy efficient, water conserving, and built in a way that minimizes the impact on the environment and is protective of indoor air quality, among other things — is the sunniest it has ever been, according to advocates and housing experts.

Green building has generally been regarded as a fringe concern, important to only hard-core environmentalists. But with steadily increasing energy prices looming over their heads, many in the boomer generation that brought us Earth Day on April 22, 1970, and many of their kids are thinking harder about how to cut energy costs, experts say.

Buildings consume 39 percent of the energy used in the United States, more than cars or manufacturing plants, according to the federal Department of Energy. Although new homes are twice as efficient as they were in 1970, residential buildings still account for about 20 percent of national energy use, says the nonprofit Virginia Sustainable Building Network.

Americans are also looking twice at green building because they have become more concerned about indoor air problems linked to toxic chemicals found in some building materials, carpets and furniture. The chemicals have been blamed for asthma and other respiratory problems. Eliminating outdoor pollution caused by burning fossil fuels for power plants also has always been an environmentalist cause.

Making a connection between buildings and these problems has taken a while. It wasn't until 1993, for instance, that plans to green the White House were announced, on Earth Day by President Clinton; they were completed within about a year.

But the connection finally is being made, say green building groups.

"It's not just for crunchies, it's not just for granola-eaters anymore," said Sean McGuire, coordinator of the Green Building Network in Maryland, an informal information-sharing service for developers and consumers that meets monthly to discuss new technologies and trends.

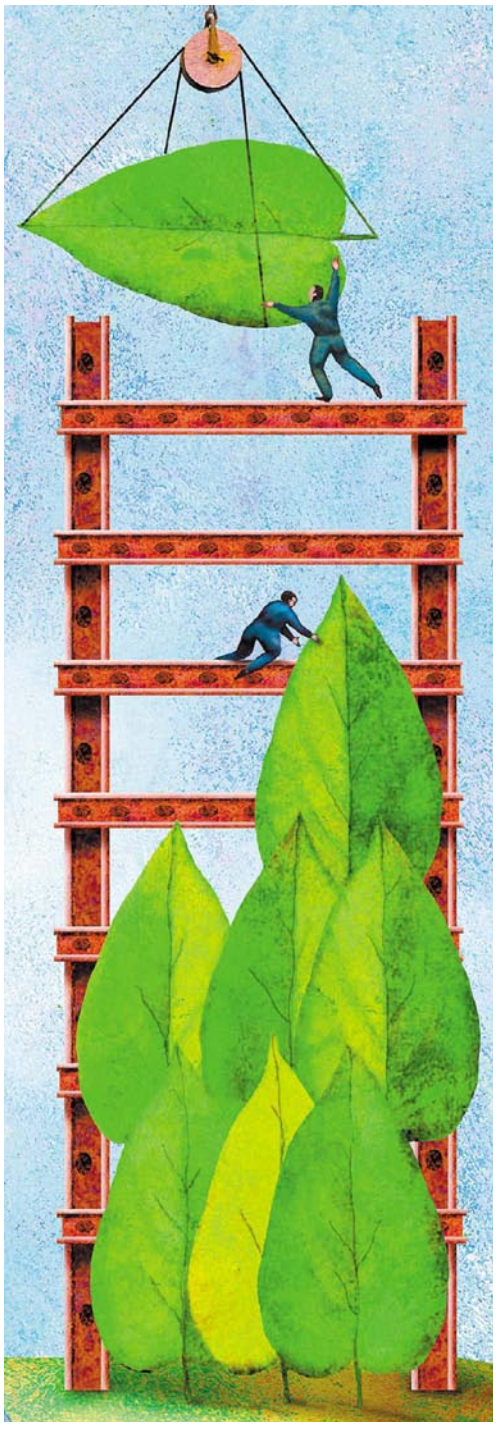

ILLUSTRATION BY WARREN GEBERT FOR THE WASHINGTON POST

The nation's big builders, meanwhile, are starting to buy into the concepts for their own reasons, say housing trend watchers.

"Historically green building has been the domain of a relatively small number of niche builders," said Ward Hubbell, executive director of the Green Building Initiative, a nonprofit group set up by the National Association of Home Builders to sell its new green guidelines program to local chapters.

But building green is a way for bigger, high-production builders to distinguish themselves from the pack, Hubbell said. "Good builders are using a lot of this already, they're just not calling it that. This raises the bar for the mass builder," he said.

Also helping to raise the bar is the realization that perhaps going green doesn't require as much green from consumers' pocketbooks as once thought. Advocates say that as more builders use green products, costs will drop, and the energy savings over the life of the house will be enough to outweigh the upfront cost differential. In some cases, they say, homeowners can cut their energy bills in half or more.

While big and small builders generally have focused their efforts in going green on states facing energy and water shortages or with extreme climates, such as California and Colorado, they're watching consumer polls that show general support nationwide for green practices, say National Association of Home Builders officials.

And it doesn't hurt when the topic comes up on national television, said John Loyer, a specialist in the association's Energy and Green Building Department.

"If you watch *Extreme Makeover: Home Edition* on ABC, they recently had a segment on a zero-energy house, a house that not only saves energy but sells back enough energy to the [power] grid to have a net zero" energy bill, Loyer said. "If it's coming up on national television in prime time, it's getting an enormous amount of attention. It's quickly becoming a question for our high-producing

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guys of 'why aren't you green?' "

"The interest is incredible" from builders, said James B. Hackler, program manager for a ratings standard program being developed for homes by the U.S. Green Building Council. The council is considered the lead private-public partnership working on the issue, but has focused first on creating and promoting a ratings and certification program for commercial properties.

The LEED for Homes program, which will start this summer with pilot programs around the country, is a follow-on to the Leadership in Energy and Environmental Design certification system that has been around since 2000 for commercial buildings. So far 171 commercial buildings have been certified and about 1,800 have applied to be certified.

"If everyone feels comfortable" with the pilot phase and how the standards might be tweaked for different climates and different building materials popular in particular markets, "then we will relaunch it and make it available to the entire country," Hackler said.

NAHB and the NAHB Research Center formally jumped into the dialogue this January when the two groups issued their first voluntary green-building guidelines at an annual industry convention.

Some green-building purists are concerned that the association's approach, which allows builders to self-certify that they have followed parts of a 200-page green checklist, might water down the overall effort or cause some confusion among consumers. A variety of federal, state and local green-building programs have taken root in the past decade that rate builders with independent certification.

But even die-hard green groups say the launch of the trade association's program represents a key shift from the fringe to the mainstream.

"When I started five years ago, very few people knew what LEED was, very few architectural firms had a LEED-accredited professional on staff, and now they have whole sections of people," said McGuire, coordinator of Maryland's Green Building Network.

There's still a long way to go, though.

NAHB estimates that out of the millions of homes constructed in the last 15 years, only

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BY TIMOTHY JACOBSEN FOR THE WASHINGTON POST

Daniel Beck, project manager with GLB Concrete Construction, ties together pieces of rebar that will support the concrete footers for Waverly Gardens Apartments in Woodstock, Md. The steel bars are made from rebar and the concrete used will contain recycled slag.

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about 61,000 have been built through local green-building programs. But enthusiasts say that doesn't count homes built or remodeled with green practices by niche builders or by industrious homeowners themselves.

And green builder groups are buoyed by how the pace of construction has picked up recently. Of the 61,000 green homes built through local programs, about 14,000 went up in 2004 alone, according to NAHB.

Local organizations acknowledge that it has taken a bit longer than they wished for Mid-Atlantic builders to get their message.

"In an area where energy costs are low and where we haven't had the energy crises like they've had in California and we haven't had the water shortages, the issue hasn't gotten the attention" it draws in other parts of the country, said Annette Osso, executive director of the Virginia Sustainable Building Network.

"And with the market the way it is here, I don't think the builders have thought they needed to worry about [green building]," Otto said. "They haven't been concerned when they're selling houses faster than they can build them."

But Otto said her group, which is a private-public partnership that represents both the LEED program and the Department of Energy's Building America program, sees momentum building in the Washington area.

For instance, the Virginia group this summer will introduce a green-building certification program pioneered in Atlanta called the EarthCraft House. Working with the Blue Ridge Home Builders Association in Charlottesville and the state home builders group, the network will build five demonstration green houses this summer.

"It's taken us almost four years to make sure the program fits the Virginia building code and to get agreement with the home builders," said the network's Pamela Vosburgh. But as soon as the pilot is done, "we hope to take this statewide."

And in Howard County, work is underway on a $16 million apartment complex for seniors that is getting financial help from the state as the county's first truly "green" multifamily project. The Waverly Gardens Senior Apartments, a 102-unit complex in Woodstock, will have solar-heated water, energy-efficient heating and cooling systems and other features. This week footings were being poured with recycled concrete and recycled steel.

In Silver Spring, Eastern Village, a 56-unit condo building opened last October with a rooftop green space, energy-efficient appliances and a geothermal heating system involving a grid of 40 wells dug 600 feet below the surface.

Also, for homeowners and builders who want to find out more about the possibilities, on May 21 the city of Gaithersburg and the Montgomery County Department of Park and Planning, and the Maryland-National Capital Park and Planning Commission are hosting a free, outdoor "Going Green at Home" fair at Wheaton Regional Park.

The proliferation of green guides and state, local and national programs can be confusing for homeowners, the experts agree. "There is some concern that all these initiatives will be so confusing that nobody will be able to figure it out," said Hackler, program manager for the LEED for Homes initiative. "But I use this analogy: Have you ever been to a grocery store where there are a lot of choices? Yet when we go in, we go right to the brand that serves our needs."

For instance, in Atlanta, he said, "they felt that the most compelling thing for consumers was not the energy savings but the indoor air quality [concerns]. They wanted to provide a safe and healthy environment for their children."

The Atlanta home builders found that people who picked houses built to the EarthCraft standards "saw an incredible improvement as far as their children's health."

COURTESY TOM KOCHEL PHOTOGRAPHY

A rendering of Eastern Village when complete.

Name _____ **Date** _____

Home, Green Home

Read "Is Green Building Budding?" The 2005 Washington Post Real Estate article covers the interest in residential design efficiency and conservation. When you have finished reading the article, answer the following questions on your own paper.

1. What are four benefits of a "green building"?

2. What potential for saving and a healthier life existed for owners who built a "green" house in 2005 as opposed to that of their parents and others who built homes 35 years earlier?

3. What are some of the possible reasons that the Mid-Atlantic region builders and homebuyers were slower in constructing green homes?

4. Reading a newspaper article from three years ago can provide perspective on what is taking place today. Select one of the following groups or initiatives that are mentioned in the article.

    - EarthCraft Homes
    - Earth Day
    - Green Building Initiative
    - Greening of the White House
    - LEED for Homes
    - Maryland Green Building Network
    - National Association of Home Builders (NAHB)
    - NAHB Research Center
    - U.S. Green Building Council
    - Virginia Sustainable Building Network

    Compare and contrast what was reported in 2005 with what has taken place in the last three years. Some of the questions you may answer include:

    Do organizations that were active three years ago still exist?
    What has happened to initiatives launched in 2003?
    Have original goals been met? Changed over time?
    What are current initiatives of the group?
    What was done after 1993 to "green" the White House?

5. Do green-building programs exist in your town/city? State? Either give a personal account of living in a green house or report on what is taking place in your community or state.

Academic Content Standards

This lesson addresses academic content standards of Maryland, Virginia and the District of Columbia.

Maryland

Science, Ecology: The student will investigate the interdependence of diverse living organisms and their interactions with components of the biosphere (Expectation 3.5)

Science, Ecology: Recognize and describe that consequences may occur when Earth's natural resources are used. (Grade 5, Environmental Issues)

a) Explain how human activities may have positive consequences on the natural environment.
- Recycling centers
- Native plantings
- Good farming practices

b) Explain how human activities may have a negative consequence on the natural environment.
- Damage or destruction done to habitats
- Air, water, and land pollution

c) Identify and describe that an environmental issue affects individuals and groups differently.

English Language Arts: Compose oral, written, and visual presentations that express personal ideas, inform, and persuade (Standard 4, Writing, 4.2)

The Maryland Voluntary State Curriculum Content Standards can be found online at http://mdk12.org/assessments/vsc/index.html.

Virginia

Earth Science: The student will investigate and understand the differences between renewable and nonrenewable resources. Key concepts include

a) fossil fuels, minerals, rocks, water, and vegetation;
b) advantages and disadvantages of various energy sources;
c) resources found in Virginia
d) making informed judgments related to resource use and its effect on Earth systems; and
e) environmental costs and benefits. (ES.7)

Biology: The student will investigate and understand dynamic equilibria within populations, communities, and ecosystems. Key concepts include

b) nutrient cycling with energy flow through ecosystems;
d) the effects of natural events and human activities on ecosystems. (B10.9)

Civics and Economics: The student will demonstrate knowledge of how economic decisions are made in the marketplace by applying the concepts of scarcity, resources, choice, opportunity cost, price, incentives, supply and demand, production, and consumption. (CE.9a)

Standards of Learning currently in effect for Virginia Public Schools can be found online at www.pen.k12.va.us/VDOE/Superintendent/Sols/home.shtml..

Washington, D.C.

Social Studies, Principles of Economics: Students understand common economic terms and concepts and economic reasoning.

1. Explain the causal relationship between scarcity and the need for choices.
2. Explain opportunity cost and marginal benefit and marginal cost.
3. Identify the difference between monetary and nonmonetary incentives and how changes in incentives cause changes in behavior.
4. Evaluate the role of private property as an incentive in conserving and improving scarce resources, including renewable and nonrenewable natural resources (E.1 Economic Terms)

Biology: Stability in an ecosystem is a balance between competing effects. (B.8. Broad Concept)

English, Research: Formulate open-ended research questions and apply steps for obtaining and evaluating information from a variety of sources, organizing information, and presenting research. (9.R.1, Grade 9)

Learning Standards for DCPS are found online at www.k12.dc.us/dcps/Standards/standardsHome.htm.