

Museum of Science and Industry Exhibit Resource Guide



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Chicago's Greenest Home

May 8, 2008 - January 4, 2009

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As part of our 75th Anniversary, *Smart Home: Green + Wired* is sponsored by:



motorola
foundation

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Special thanks to our partners:





Museum Green Achievements

A recent City of Chicago Green Museum Certificate recipient, here is a sample of how we put green principles into action at the Museum and throughout the community.

- We formed an interdepartmental team to provide information and tools for Museum staff and visitors to think green and help the Museum make eco-friendly choices.
- We led facility improvements, such as:
 - Solar panels that generate up to 50KW of the Museum's electrical needs.
 - Waterless urinals and awaiting certification for grey-water system for public restrooms.
- The Museum's Sustainability Master Plan will help assess current operations and will develop and recommend sustainable alternatives.

Dear Friends,

The Museum of Science and Industry opened its doors in 1933. That same year, Chicago hosted a spectacular celebration of human innovation in architecture, science, technology and transportation: The Century of Progress World's Fair. I read about one exhibit from that fair that has always fascinated me. The "Homes of Tomorrow" display unveiled visionary building methods and technologies like prefabricated homes and solar-powered heating.

Today, green practices lead modern industry. It is our ongoing mission to provide our guests with new information about these practices and relevant, hands-on experiences. Students build model fuel cell cars in Museum Learning Labs, and after-school program participants explore solar-panel technology and teachers learn how to present alternative energy content in their classrooms. As a tribute to environmentally-aware science education, it seems only fitting to showcase scientific and industrial innovations, new materials and technologies shaping the homes of *our* future.

Like Chicago's architectural father Daniel Burnham, the Museum of Science and Industry makes no little plans. When we decided to showcase the future of eco-friendly architecture, of course, only a real home demonstrating the cutting-edge in green technology and sustainable materials would do! We contacted architect Michelle Kaufmann, one of the country's most innovative designers of sustainable green homes, and All-American Homes, an industry leader in superior modular home construction, and we knew we had the blueprint for an extraordinary exhibit experience: a real, fully functioning eco-home right here at the Museum.

We are proud to open our home to you—a 2,500-square-foot mkSolaire™ house, crafted with recycled and renewed materials, featuring the very latest in energy and resource efficiencies. With the help of *Wired* magazine, "smart" technologies have been incorporated throughout the home. The technologies not only offer increased convenience, but also ensure that the home is as energy-efficient as possible.

Smart Home: Green + Wired invites guests to learn about the small and big ways they can be more eco-friendly in their own homes. Open the doors to a true home of tomorrow, here at the Museum today.

Welcome Home!

David R. Mosena
President, CEO
Museum of Science and Industry



Smart Home ... Chicago's Greenest Home!

According to the Chicago Green Homes program, *Smart Home: Green + Wired* is "Chicago's Greenest Home"! This notable designation is a result of a comprehensive review of the home's construction plans, materials and design in relation to the City of Chicago's Green Building Standards.

Chicago Green Homes is a program sponsored by the Chicago Department of the Environment and the Chicago Department of Construction and Permits to promote sustainable green design and residential construction.

Enjoy your tour through Chicago's extraordinary, one-of-a-kind green home!

Dear *Smart Home* visitors,

The City of Chicago has made a commitment to being the most environmentally-friendly city in the nation, and green buildings are an important part of our efforts. We're constructing every new city facility as a green building, using 20 percent less energy than conventional construction, providing healthier air for building users and improving the quality of life in our neighborhoods. The Museum of Science and Industry's *Smart Home: Green + Wired* exhibit highlights the importance of these efforts.

All new city facilities, including libraries, schools and police stations must be LEED (Leadership in Energy and Environmental Design) certified, and meet minimum environmental standards incorporating such things as solar panels, reflective roofs and other improvements into their design.

In addition, the City's Green Permit Program provides developers and owners with an incentive to build green by streamlining the permit process timeline for their projects. We've also developed six "Green Home Remodeling Series" guides to encourage and help homeowners make environmentally conscious choices when rehabbing their homes.

Through the City's Historic Chicago Bungalow Initiative we have also helped more than 9,000 homeowners restore and adapt bungalows by providing special financing options, vendor discounts, technical assistance and education.

We are also working with local museums to form a Green Museum Network. Members such as the Museum of Science and Industry have implemented green procurement strategies as well as incorporated green-building strategies into their business practices.

The Museum of Science and Industry's *Smart Home: Green + Wired* will go a long way toward educating residents and visitors alike on how being green can help improve the environment as well as save money. By working together, we can conserve and protect Chicago for future generations to come.

Richard M. Daley
Mayor, City of Chicago

Meet Michelle Kaufmann

Michelle Kaufmann, founder and chair of Michelle Kaufmann Designs (MKD), is a leader in the green design community, and her commitment to sustainable living remains constant throughout all of her work. She and her husband live in a “green home” of her design in California’s Marin County.

Museum of Science and Industry: This is your first project in the Midwest, Michelle. As an Iowa native, how do you feel about returning for a project in the “Heartland”?

Michelle Kaufmann: I am so excited to have one of our homes built in the Midwest, not just because this is where I’m from, but also because growing up here gave me my appreciation of the balance between the land, how we live on the land and the climate. My grandparents owned a farm and I enjoyed the beauty of rural buildings like barns. Because barns are designed for function, climate and the minimal use of materials, many sustainable approaches that we incorporate into our home designs are born from barns. Barns use strategically placed openings for light and breezes; sliding doors and walls on tracks are some of my favorite elements. We have incorporated these into the mkSolaire and the *Smart Home: Green + Wired* exhibit.

MSI: How about designing for an urban lot?

MK: The mkSolaire is designed as a healthy, green-living solution for the city. Even in a typical city lot where two sides do not see sunlight, this home is washed with natural light (and the homeowner can save energy by using daylight instead of artificial light), natural ventilation, with clean lines and warm materials. The home also maximizes every square foot by incorporating roof decks and green roofs, making those spaces habitable and making the home feel larger. “Design big” rather than “build big” is one of our main mottos.

MSI: Why is your partnership with the Museum of Science and Industry a “natural”?

MK: One of the best parts of this project is working with the Museum of Science and Industry. When I was in middle school, my entire class of 300 kids piled into a caravan of buses and drove from Iowa to Chicago just to visit this Museum! The mixture of the grand architecture, science and technology was intoxicating. The combination of these interests persisted throughout my life and has brought me to this point. I’ve come full circle and now have the honor of helping to create an exhibit that also combines architecture, science and technology, an exhibit that I dearly hope will inspire the children who experience it. This is the perfect audience; it is this generation of children, with support from their parents, that will save our planet.



Michelle Kaufmann inside the *Smart Home*

MSI: What do you hope *Smart Home* visitors will learn or do as a result of this exhibit?

mk: I hope this exhibit will teach people to think about how our lives, habits and behavior affect the environment. I think seeing so many green alternatives will encourage people to think about how they live and the decisions they make every day. Hopefully, people will leave with ideas to incorporate into their own homes. I also hope the home inspires people to imagine, innovate and invent sustainable solutions of their own. Finally, it’s important to us that people learn that going green is becoming easier. Our firm’s mission is to make thoughtful, sustainable design more accessible because the easier it is for people to go green, the better our chances of saving this planet. That’s another reason we’re so delighted to be a part of the *Smart Home* exhibit educating guests about how to live green.

Keep updated with Michelle Kaufmann at blog.michellekaufmann.com

Pre-fabulous

The House that All American Homes® Built

All American Homes is an industry leader, with expertise in residential and commercial modular (systems-built) construction.

When a home is built on site, architects, contractors and builders must contend with delays because of weather, wasted materials, among other obstacles. Realizing that pre-built components made construction more efficient and affordable, pioneers in the home-building industry followed the precedent of the automotive industry. Homes built in factories instead of on site save time, energy and materials.

What is a modular home?

A modular home is comprised of complex “modules,” built offsite in a climate-controlled environment. These highly-engineered components are built in a factory and transported to the building site where they are set onto a permanent foundation. Like traditional homes, modular homes must pass the same code requirements. Modular homes can be fully customized to meet the homeowner’s preferences and can be built to any specification or size.

Why choose prefab over site built?

- Typical on-site construction jobs do not have provisions for materials storage and most materials have to be cut to length in the field so “cut offs” are often trashed. Modular, factory construction saves time and materials. Wood is delivered pre-cut for many components and computerized saws do the rest. Cut offs from framing are

The Building of *Smart Home*

1. In summer of 2007, Michelle Kaufmann Designs (MKD) worked with the Museum to discuss design.
2. MKD and the Museum worked to integrate the home into the Museum site.
3. During January 2008, the *Smart Home* is constructed in the All American Homes factory from the inside out, with reviews by inspectors following every step. From beginning to end, the project is designed and built to meet local building codes, with the most stringent requirements.
4. Floors and walls were assembled on large assembly lines inside the All American factory.
5. Utilities are roughed into the floor and wall components and gypsum board is affixed to the structure.
6. Electrical and heating, ventilation and air conditioning systems begin.
7. The roof, which has been constructed at the same time in another part of the factory, is set on top of the walls.
8. Exterior sheathing is installed, and exterior cladding installation begins.
9. Interior finishes (plumbing fixtures, lighting, appliances, countertops, etc.) are installed.
10. March 3, 2008, *Smart Home* begins its journey from the All American Homes factory to the Museum on flatbed trucks.
11. The Parallel Construction™ process (building the home simultaneously with the foundation) allows *Smart Home* to be built while the contractors excavate and pour the foundation on the site.
12. March 4, 2008, *Smart Home* arrives at the Museum. A 250-ton crane lifts modular components from the trucks to the foundation using heavy-duty cables, steel straps and very careful coordination!
13. Once they were in place, the modular units are bolted down and the “button up” work began.
14. The “marriage walls” (the area where the modular units come together) tie the whole home together, but disappear once the home is complete.
15. Utilities are connected between each module and to the various services on the site.
16. Site work and final construction completed by Norcon, Inc.
17. April 22, 2008 landscaping installation began.
18. Home automation system installed by 3G Applied Technologies.
19. Home’s interior is furnished by Verde Design Studio.



used for blocking or to heat the factory or employees' homes. Drywall, wiring, sawdust, vinyl and other scraps are collected and recycled.

- Generally speaking, a home can be completed in several weeks in the factory, and finished onsite in three to eight weeks. A site built home of similar size could take four months or longer.
- Factory built-homes are constructed from the inside out. That means electricians and plumbers have easy access into the walls during construction.
- Homes built in the factory are not subject to Mother Nature's whims. Production continues despite snow, rain, sleet and heat.

All American Homes

www.allamericanhomes.com

Norcon Inc.

General Contractor for the Smart Home and engaged in several green projects throughout the Chicagoland area.

www.norconinc.com

photos (from left to right): *Smart Home* on assembly line. Foundation was laid. Modules arrived at the Museum. Norcon finished site work.



Smart Home: A Green Giant

From the foundation to the green roof, every square inch of *Smart Home* demonstrates energy efficiency in action. Systems, materials, appliances, even the direction of the windows work in harmony to make this home a lean, green eco-machine.

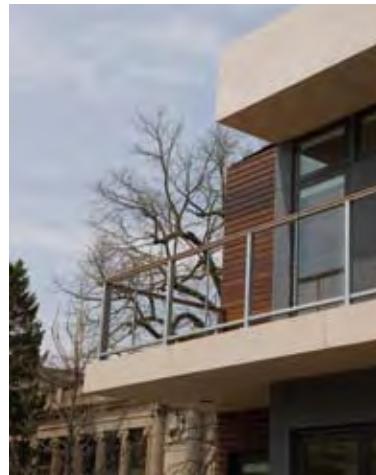
How green? An energy audit was conducted, comparing *Smart Home* with other homes, including a typical Chicago bungalow, to see how they measured up in terms of energy efficiency. Let's just say the competition is green with envy.

The study measured homes, heating, air conditioning, electricity and water

use with the home energy rating system index (HERS Index), considered the gold standard in energy efficiency ratings in Illinois. A zero rating would represent a home that either consumes no energy or consumes no more energy than it supplies to the grid. Each point represents a one percent increase in the energy consumed by the house, so the goal is to have as low a HERS Index rating as possible.

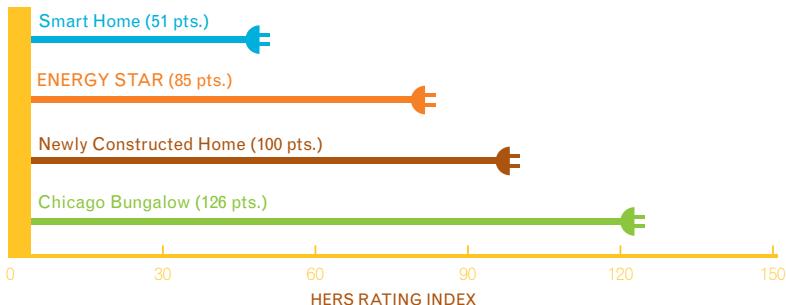
The third runner up in the study was the beloved Chicago bungalow, a vintage masonry structure common throughout the 1920s, 30s and 40s. This stately, but not-so-energy efficient edifice racked up 126 points on the index. Second runner up: a typical newly constructed home, one designed to meet the International Energy Code requirements and in accordance with City of Chicago jurisdiction for new residential con-

struction received 100 points. First runner up: a comparably sized ENERGY STAR home, one built to meet the Department of Energy's rigorous energy efficiency goals, received 85 points. The winner: The Museum's *Smart Home* with a sparse 51 points. This home is almost twice as energy efficient as an ENERGY STAR home, and nearly three times as green as a Chicago bungalow.



The *Smart Home* energy comparison was conducted by Kouba-Cavallo Associates (www.kouba-cavallo.com) using energy rating software, the REM/RATE tool used by home energy raters in Illinois and created by Architectural Energy Corporation.

HOME ENERGY RATING SYSTEM (HERS)



Energy Costs

Smart Home = \$837 per year for heat; \$125 per year for cooling; \$1,977 for all energy consumed. Solar cells reduce cash outlay by \$264.

Bungalow = \$2,021 per year for heat; \$3230 for all energy uses.

Saving Green

Smart Home residents could spend that extra \$1,253 in green on a wardrobe full of vintage clothing, a lifetime supply of CFLs, a table made from FSC-certified wood—the possibilities are endless!

How does *Smart Home* manage to be that energy efficient? Every decision in the building's design and construction was made with energy efficiency in mind.

Many of *Smart Home's* energy efficiencies can easily translate to your home. It's easy to be green!

These simple energy saving tips are a great way to start; then work your way to more!

- Snuggle in a sweater or blanket before hiking up the heat, and in the

summer, install window fans instead of cranking the AC.

- Decide what you want BEFORE you open the fridge.
- Scrape, don't rinse, before using the dishwasher.
- Turn off the light when you leave the room.
- When it's time to purchase new appliances, make them energy-efficient models.
- Consider purchasing a low-flow showerhead or a dual-flush toilet.
- Use leftover water from your drinking glass, pet bowl or cooking pot to hydrate thirsty house and garden plants.
- Read by natural light when possible.
- You can also monitor monthly use by visiting www.ComEdCARE.com or ENERGY STAR's Home Energy saver at hes.lbl.gov/hes.

Powered by the Sun

Atop *Smart Home's* roof is the newest in solar energy technology: photovoltaic (PV) film. This material absorbs the sun's power, transforming it into usable energy: enough to power the majority of the 2,500 square-foot *Smart Home*. This photovoltaic film provides maximum solar-charged electricity production (15-20 percent more efficient than traditional solar panels), is tolerant of shade and is easy to install, even on sloped and



curved roofs. What's more, when the home is not using the PV system, energy is sent back to the Museum's main grid to be used throughout the Museum.

P.V. film supplier | Uni-Solar | www.uni-solar.com

Save Energy, Save Money!

ComEd and Peoples Gas offer easy ways to save energy and trim bills.

- **Purchase CFLs.** ComEd will offer incentives beginning June 2008 when you purchase CFLs, which use about 75 percent less energy than incandescent bulbs and last up to 10 times longer.
- **Replace old appliances.** Earn incentives with ComEd, beginning in June 2008, for recycling inefficient air conditioners and secondary refrigerators and freezers.
- **Participate in Nature First.** Through Nature First, ComEd can remotely cycle customers' air conditioner compressors on and off during peak demand times. This program helps participants earn bill credits of up to \$10 per month during summer months and curtail usage.
- **Check out real-time pricing.** Manage your own electricity usage in response to market conditions. Buy power on an hourly basis and reduce usage when prices are high.
- **Enjoy reduced greenhouse gas emissions.** Peoples Gas provides natural gas to nearly one million customers; natural gas is the fossil fuel that produces the fewest greenhouse gas emissions.
- **Get energy-saving assistance.** Peoples Gas provides weatherproofing, conservation and energy auditing resources for customers.
- **Find tips for bungalow owners.** Peoples Gas provides a program specifically designed to help Chicago bungalow owners to be greener!
- **Weatherize.** Team Home Energy Assistance Together (HEAT) program enlists Peoples Gas employee volunteers to weatherize homes of low- and fixed-income residents.
- **Learn more tips and tools.** Visit www.ComEdCARE.com and www.peoplesgasedelivery.com

Get Smart. Get Wired.



Wired magazine served as the technology and automation advisor for the *Smart Home*, helping to identify and secure "smart" systems, with a focus on energy efficiency, homeowner awareness and great design. The award-winning magazine and Web site are the first word on how technology is changing our world. www.wired.com



This home leads a secret double life behind the wood and drywall. There's a digital nerve center built into the *Smart Home* that works constantly and automatically to save the homeowner's time, reduce energy consumption and make life more entertaining.

Alarm clocks are a thing of the past when the entire home is programmed to rise and shine. In the morning, the home's **Life|ware** automation system clicks on lights, raises the shades and cues wake-up music from the **NuVo** digital music server. The motorized skylight in the ceiling opens when detectors sense a cool breeze and **Botanicalls** digital sensors in the houseplant gives the family a call when they need water.

Truly a smart home, the PC-based automation system makes it easy for users to add new features and adjust settings. The energy dashboard in the mechanical room offers important information to guide a homeowner's decisions. The flat-panel LCD screen compares the current use of electricity, gas and water in the home totals from with yesterday and last month. This way, users can discover ways to curb consumption. Alerts sent via the Internet from ComEd advise the homeowner about electricity shortages during peak times of day, saving money. Leaving for the day or for vacation? The whole house can be placed in "shut-



down" mode, automatically securing doors, turning off lights and lowering heat or air conditioning.

Not all the technology is behind the scenes. A streamlined, foldable **Strida** bike boasts an ingenious collapsible aluminum frame so homeowners can commute from train to doorstep, saving time and energy. And the ultra-compact handheld PC from **Samsung** provides easy access to email, energy information and home control screens. Even the household pet, a dinosaur robot named **Pleo**, exhibits lifelike behavior and allows users to upgrade its software.

Behind the scenes or front and center, smart technology is making it easy to be green.

WIRED
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just \$10 – less than \$1
per issue.
Visit
www.wired.com/subscribe
or call (800) 769-4733

Five Principles

Five key principles guide decisions regarding *Smart Home's* design, construction and day-to-day operation. These ideals, incorporated throughout the home, demonstrate sustainability and environmental conscientiousness in action:



1. Smart Design.

Our *Smart Home* was designed to “let the green in.” All Michelle Kaufmann Design (MKD) homes are built to human scale, using only what is needed, but remaining open and airy. High ceilings, warm materials, clean lines and abundant light and breezes make the home feel even more spacious. A full-home, automated smart technology system enables homeowners to control heat, window coverings, lighting, security sensors and cameras, as well as track electricity, gas and water consumption in real-time.



2. Material Efficiency.

Faster. Cleaner. More precise. The Museum's *Smart Home* was prefabricated, built in modules off site. Crafted in a controlled indoor environment, the construction timeline was shortened. Because it was built more quickly and in a controlled, indoor environment, less energy and fewer resources are used than to build a traditional home. Materials used are renewable or recycled: bamboo flooring, FSC-certified wood and recycled glass tiles are a few of the low-impact choices.



3. Energy Efficiency.

High tech. Low impact. Throughout the home, materials and technology help save energy. The green roof helps cool in the summer, insulate in the winter, absorb rainwater and minimize runoff. Huge windows, sliding doors and sunshades help light, heat and cool the house. Solar rooftop panels generate much of the home's electricity. ENERGY STAR appliances and an array of energy-efficient technologies help as well.



4. Water Efficiency.

Water is the Earth's most precious resource, yet in traditional homes, more than one-quarter of drinking-quality water is used to flush toilets! *Smart Home* features an array of water-efficient technologies and appliances, such as low-flow showerheads and dual-flush toilets that generally use less than a gallon of water each time. Rainwater and “grey water” (rinse water from the clothes washer, shower, etc.) are used to flush toilets and replenish outdoor greenery.



5. Healthy Environment.

Healthy homes are happy homes. MKD seeks to create healthy environments by using non-toxic materials: no- or low-VOC paints; air filtration and purification systems; and spray-in foam insulation, which is more effective than fiberglass batting and minimizes mold. A healthy environment continues outside the home, too with water recycling systems to hydrate plants, native plants that are better adapted to climate conditions, permeable paving materials and more.



Exhibit Tour

Join us on a tour of the *Smart Home*. Highlighted are some of the vendors, products, materials, furnishings, appliances and technologies that made the exhibit possible.



Throughout Smart Home

●● Home automation system | Life | controller | Gift of: 3G Applied Technologies (hardware) Exceptional Innovation (software) | www.life-ware.com | Simplifies automated control of lighting, window coverings, heating, air conditioning, audio and security—saving homeowners energy and money.

●● Home automation install and integration | Gift of: 3G Applied Technologies | www.3Gappsonline.com. | Text 3G to 30364 to inquire about starting your own Smart Home today.

●●● All-digital, high-definition touch panel | Life | point 8.9 | Gift of: 3G Applied Technologies | www.life-ware.com | Lighting, audio, climate, cameras and security systems and instant access to digital entertainment.

●● NuVo Multi-room Audio System | Essentia E6G and NV-M3 | Gift of: NuVo | www.nuvotechnologies.com | Energy Star-compliant with unprecedented energy efficiency.

● In-ceiling speakers (part of Kevlar™ series) | Gift of: Jamo | www.jamo.com | All products are RoHS (restriction of hazardous substances)-compliant, designed to help eliminate the disposal of electronics. Recyclables are used whenever possible in components and packaging.

● LED light fixtures | Gift of: Progress® Lighting | www.progresslighting.com.

●● Lighting Control | Lutron HomeWorks | Gift of Lutron Electronics Co., Inc. | www.lutron.com/HomeWorks | Provides convenient control of your home's lighting.

●● Windows, doors and skylights (pictured) | Designer Series and motorized skylights | Gift of: Pella Windows and Doors, Inc. | www.pella.com | Energy-efficient window and motorized skylight placement helps optimize energy efficiency, natural lighting and ventilation for the home, minimizing the need for artificial light and air conditioning. Dual-panel, Low-E glass can save 10 to 25 percent of heating and air conditioning from leaking.

● Interior paint (pictured) | Air02 | Gift of: Yolo Color House | www.yolocolorhouse.com | No VOC, no off-gassing of toxins.

●● Heated radiant subfloor | Warmboard Radiant Subfloor | Gift of: Warmboard Inc. | www.warmboard.com | The high conductivity of Warmboard leads to lower water temperatures and heats the room from the floor up; both lead to greater energy efficiency.

●● Thaw-Pak Radiant Floor system including system engineering, tubing, manifolds and pump control station | Gift of: Performance Engineering Group, Inc. | www.performanceengineering.com | Radiant floor system installed into subfloor.

●● Heating, ventilation and air conditioning | QuietAir High Velocity Air Handler & Insulated Duct | Gift of: z Comfort Pro Systems | www.comfortprosystems.com | These systems use narrower ducts than traditional forced air systems, which makes the air flow from vents faster and thus heats or cools a room in less time.

●● Home insulation | Spray-in place formula | Gift of: the Icynene Insulation System® | www.icynene.com | Reduces energy consumption by up to 50 percent, does not off-gas volatile organic compounds over time



and eliminates or reduces other construction materials. Minimizes mold, exceeds the American Lung Association criteria for a healthy home.

● **Interior doors and millwork** | Gift of: National Door & Trim | www.National-Door.com | Recycled sawdust and responsibly harvested hardwoods.

● **Metal stairs and wood stair treads** (pictured) | Gift of: Designed Stairs, Inc. | www.designedstairs.com | Custom designed and welded steel fabrication with white ash treads and handrail.

● **Stair railing** | Cable rail™ | Gift of: Feeney Architectural Products | www.feeneyarchitectural.com | www.cablerail.com.

● **Roof sheathing** | Gift of: Barrier Technology Company | www.intlbarrier.com

● **Roof membrane** | Gift of: MuleHide | www.mulehide.com | Light colored membranes reflect sunlight and cool building interior for energy savings.

● **Exterior wrap** | WallShield® | Gift of: Vapro Shield | www.vaproshield.com | The most weather-resistant rain screen on the market, which makes it best for reducing the risk of mold, mildew and rot.

● **Exterior wood siding** | Gift of: Iron Woods | www.ironwoods.com | FSC-certified Ipè | Long-lasting, low-maintenance.

● **Exterior cement siding** | Cembonit Fiber Cement Panel Rainscreen | Sand with flint accents | Gift of: Cembonit | www.cbf11.com | Cement is a “green” material, plus the color is integrated into the material, rather than needing paint applied (long-lasting, low-maintenance).

● **Mortar, grout, wood adhesive** | Gift of: MAPEI Corporation | www.MAPEI.com/US | Most products are manufactured within 500 miles with LEED-compliant ratings for recycled content.

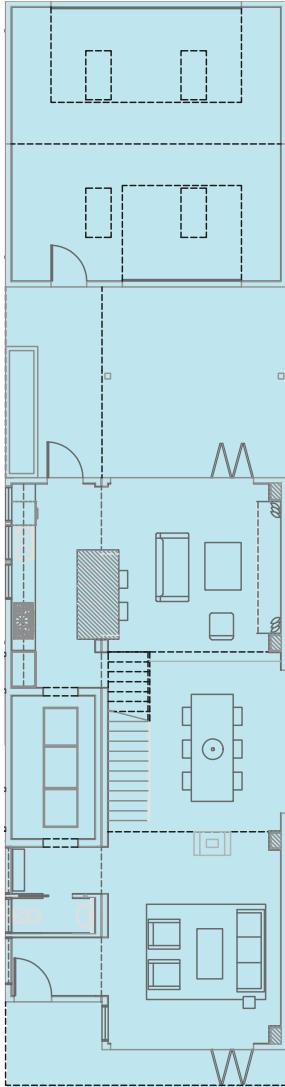


● **Fire protection sprinkler system** | Gift of: Northern Illinois Fire Sprinkler Advisory Board | Installed by: Great Lakes Plumbing and Heating.

Gypsum Board | Gift of: Georgia-Pacific | www.gp.com | Low-VOC joing compound.

For additional products and information please visit msichicago.org/smarthome.

- Smart Design
- Material Efficiency
- Energy Efficiency
- Water Efficiency
- Healthy Environment



First Floor

●● Entryway light | VESSEL light fixture with LED lights in a vase | Gift of: MKD | www.mkd-arc.com/products/vessel | LED can be 90 times more efficient than incandescent lights.

● Deadbolt lock (pictured) | Sunnect AP501 | Gift of: Cydus LLC | www.cydus-solutions.com | Highest level of security. Auto-lock feature automatically locks your door when it is closed. Protects against lock-picking or vandalism.

●● Terra Green ceramic floor tile | Limestone Jurastone Beige #L711 18" x 18" - Mapei #94 "Straw" grout | Daltile | www.terragreenceramics.com | Made with 55 percent recycled glass content and qualifies for LEED certification points.

●● Carpet runners | Straight and Narrow, Cream | Gift of: FLOR | www.FLOR.com | Because each floor tile is separate, cleaning is easy: only the tiles that are soiled need to be washed. Uses non-offgassing, recycled materials. Greener than traditional carpeting that harbors mold and mildew.

●● Large opening Glass Walls | Gift of: NanaWall® | www.nanawall.com | The weather-tight, energy-efficient system meets or exceeds industry standards for air infiltration, water penetration, structural and thermal performance and forced entry. Pocket doors opens up the walls, extending the sense of space!



●● Shade motors | Sonesse™ 30 RTS Motor (ultra-quiet precision window-covering automation) | Gift of: Somfy Systems, Inc. | www.somfysystems.com.

●●● Window coverings | Gift of: Springs Window Fashions | Graber® LightWeaves™ Roller & Solar Shades | www.graberblinds.com | Low-VOC shade material and installation, highest human ecological safety standards.

● Bone lamps | 21" and 23" tall, 4" diameter | Loaned by: materious | www.materious.com | Made of scrap PVC sewer pipes and salvaged drainage pipes. Inspired by the structural efficiency of birds.

● Console | Loaned by: Green Sawn Studios with Bladon Conner Design | www.greensawn.com and www.bladonconnerstudio.com | Made from recycled plywood, vintage fabric and second hand leather belts.

● iPort | in-wall iPod dock | Gift of: iPort Music | www.iportmusic.com | This in-wall iPod dock lets homeowners pipe audio from their music player throughout the home.

● Umbrella (pictured) | Gift of: Ambient Devices | www.ambientdevices.com | World's first intelligent, connected umbrella; forecasts the weather 12 hours in advance.

Kitchen

●● **Crestwood kitchen cabinets** | Oak veneer, Espresso stain | Gift of: McNulty Design Group, Inc | www.mcultydesign.net | Made from FSC-certified wood, no-VOC wood sealant and formaldehyde-free particleboard substrates.

● **Countertops** | Made of EcoTop biocomposite (bone/ivory) | Gift of: EcoTop | www.kliptech.com | Blend of recycled wood fiber from demolition sites bound together with a water-based resin formula that is both petroleum-free and VOC-free.

● **Undercabinet lighting** | Gift of: Progress Lighting | www.progresslighting.com | Energy-efficient LED which can last 30,000 to 50,000 hours, as compared to incandescent bulbs' 800 to 1,000.

● **Dishwasher** | ENERGY STAR-qualified GE Monogram® Fully Integrated Dishwasher | Gift of: GE | www.monogram.com | If all Americans used ENERGY STAR-qualified GE dishwashers, more than 20 billion gallons of water would be saved per year — enough to fill 25,000 Olympic swimming pools.

● **Cooktop** | GE Monogram® 36" Stainless Steel Gas Cooktop (natural gas) | Gift of: GE | www.monogram.com.

● **Oven** | GE Monogram® 30" Built-In Single Wall Oven | Gift of: GE | www.monogram.com.

● **Range hood** | GE Monogram® 36" Slide-Out Hood | Gift of: GE | www.monogram.com | Six levels of lighting allow user to choose the lighting to match the cooking task or occasion.

● **Refrigerator/freezer** | ENERGY STAR-qualified GE Monogram® 36" Built-In Bottom-Freezer Refrigerator | Gift of: GE | www.monogram.com | Uses 15 percent less energy than currently required by federal standards.

● **Garbage disposal** | GE® 1 Horsepower Continuous Feed Disposer | Gift of: GE | www.ge.com.

Sink | Single Basin Sink Undercounter Kitchen Sink | Kohler Poise™ | Gift of: Kohler | www.us.kohler.com.

● **Faucet** | Kohler Coralais® | Single-Control Kitchen Faucet, Polished Chrome | Gift of: Kohler | www.us.kohler.com | Aerator reduces the amount of water used.

●● **Ultra Mobile PC** | Q1 Ultra Premium UMPC | Gift of: Samsung | www.samsung.com | Fully RoHS (restriction of hazardous substances) compliant and supports LCD/battery state recycling programs.

● **YHF barstools** | Loaned by: S² Design LLC | www.s2designonline.com | Certified baltic birch plywood, no-VOC finish.

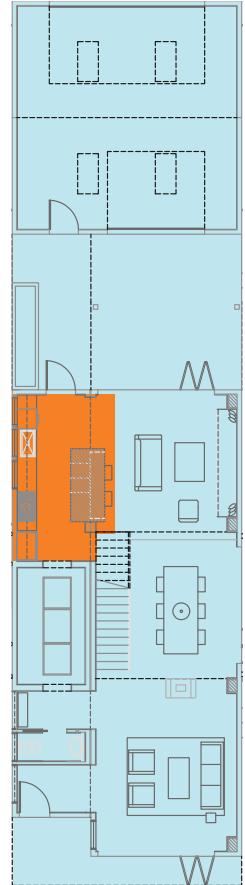
● **Coffee maker** | Breville Gourmet Single Cup Brewer | Gift of: Breville | www.BrevilleUSA.com | Reusable My K Cup® uses any coffee grind.

● **Toaster** | Breville Die-Cast 2-Slice Smart Toaster | Gift of: Breville | www.BrevilleUSA.com | One-touch, automated, plus convenient "lift and look" feature.

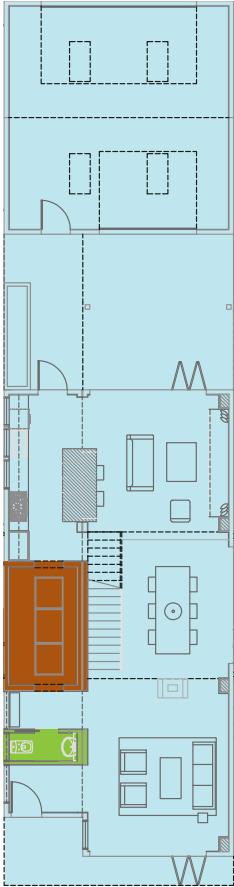
● **Servingware** | Valencia plates, Miguel glasses, Flair bamboo bowls, Angled bamboo utensil holder, bamboo flatware, Hyacinth placemat, Terrazo planters, Cabo candleholders | Gifts of: Crate & Barrel | www.crateandbarrel.com | Plates, glasses and candleholders are 100 percent recycled glass. Bamboo products are from fast-growing bamboo plants. Placemat from sustainable water hyacinth plant. Planters are made of marble, stone and cement.

● **Groceries** | Gift of: Dominick's O Organics' brand www.dominicks.com/o_organics_main.asp | Features more than 300 USDA-certified organic foods and beverages. Safeway, Dominick's parent company, is a leader in renewable energy.

● **Composter** (pictured) | NatureMill tabletop electric composter | NM52 | Gift of: NatureMill | www.naturemill.com | Not only is NatureMill 100 percent recyclable itself, it also recycles its weight in waste every 10 days, diverting more than two tons of waste from landfills over its life.



- Smart Design
- Material Efficiency
- Energy Efficiency
- Water Efficiency
- Healthy Environment



Powder Room

● **Toilet** | San Raphael™ Comfort Height one-piece, elongated toilet seat (white) | Gift of: Kohler | www.us.kohler.com | Uses at least 20 percent less water than standard 1.6-gallon toilets.

Toilet seat | Kohler Quiet-close™ seat with quick release™ functionality | Gift of: Kohler | www.us.kohler.com.

● **Sink** | Wellworth Pedestal lavatory | Gift of: Kohler | www.us.kohler.com. | Aerator reduces the amount of water used.

● **Towels** | Hand loomed organic cotton towels | Gift of: Viva Terra | www.vivaterra.com | 100 percent certified organic without heavy metal dyes, chlorine bleach or synthetic finishing agents.

● **Wall tile** | Blazestone tile, 2x2", mineral water glossy finish classis | Gift of: Bedrock Industries | www.bedrockindustries.com | Made from 100 percent recycled consumer glass, made entirely from post-industrial and post-consumer glass with no additional oxides or colorants.



Mechanical Room

● **Washer** | ENERGY STAR qualified GE® Frontload Washer | Gift of GE | www.geappliances.com/products/energy/ | Delivers energy and water savings with the HydroMotion™ wash system. Uses as little as 10 gallons of water for a small load, 23 gallons for a large load.

● **Dryer** | GE® Frontload Electric Dryer | Gift of GE | www.geappliances.com/products/energy/ | Dual-moisture sensor bars direct dryer to end cycle once clothes are dry. Multiple cycles match to fabric type for enhanced performance and flexibility. SpeedDry option dries small loads in as little as 13 minutes.

● **Home energy monitoring** | Gift of: Silver Spring Networks | www.silverspringnetworks.com | Provides intelligent networking for energy and utility companies.

● **Energy dashboard** | Gift of: Lucid | www.lucid-designgroup.com | LCD screen shows current use of electricity, gas and water in the home and compares totals with yesterday and last month.

● **WS2000 Wireless Switch** | Gift of: Motorola | Integrated router, gateway, and firewall, all in one device. This product is RoHS and Energy Star compliant. | www.motorola.com/ws2000

● **MU Gateway** | Gift of: Motorola | Motorola's Powerline MU Gateway enables broadband signal into the home's electrical system. This modem converts the signal back to a standard broadband signal anywhere a connection is needed. | www.motorola.com

● **The Motorola Netopia® 7000 Series Voice Gateways** | Gift of: Motorola | Enables the convergence of Triple Play IP services – Video, Voice, and High-Speed data – over ultra-broadband networks. The 7000 Series Gateways are designed to make wired and wireless home networking easy and secure. | www.motorola.com



Living Room

● **Twisty stool** | Gift of: Viva Terra | www.vivaterra.com | Hand-carved monkeypod wood.

● **Meyer chairs** | Gift of: Verde Design Studio | www.verdedesignstudio.net | **Upholstery** | Bull's Eye | Gift of: Pollack | www.pollackassociates.com | 100 percent recycled polyester.

● **Tuxedo sofa** purchased from resale shop | Gift of: Verde Design Studio | www.verdedesignstudio.net | **Sofa Upholstery** | Second chance | Gift of: Brentano | www.brentanofabrics.com | Recycled polyester – 43 percent blend | **Sofa throw** | bamboo cloth, footbridge | Gift of: Brentano | www.brentanofabrics.com | 100 percent bamboo face with bamboo, polyester, cotton.

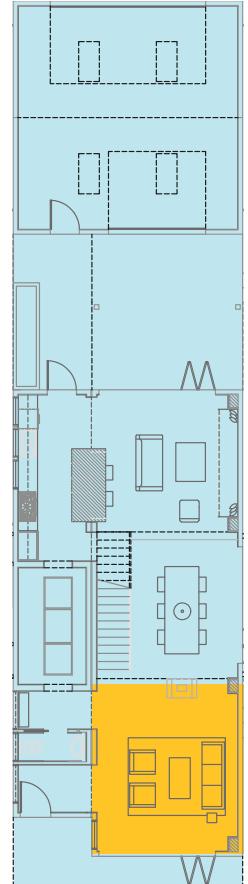
● **Rug** | American rug | Loaned by Edward R. Varndell | Organic Navajo Mohair. Backing made from recycled coffee bean bags. Natural rubber latex coating for non-slip surface.

● **Hyde Park coffee table** (pictured) | Loaned by: 2 point perspective design | www.2pointperspective.com | Made of locally-sourced reclaimed walnut, finished with non-toxic clear finish. Legs are locally-sourced reclaimed ash, finished with a dark, non-VOC stain.

● **Artwork** | Loaned by: Brian Andreas | Part of the artist's eco-"chalkboard" series with imagery and text about green living. Andreas uses non-off-gassing paints and the chalkboard character to enable future variations painted over the same canvas.

● **Accent wall paint** | Stone.05 | Gift of: Yolo Colorhouse | www.yolocolorhouse.com | No-VOC, no off-gassing of toxins.

● **Fireplace** | Ecosmart Vision vent free | Gift of: Casamonte | www.casamonteusa.com | Burns ethanol, a renewable resource, not fossil fuel.



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Lounge

● **Bench** | Crestwood Cabinetry | FSC-certified oak veneer, chocolate oak stain | www.mcultydesign.net | **Upholstery** | Caress Fennel | Gift of: Brentano | www.brentanofabrics.com | Biodegradable, non-off-gassing faux leather.

● **T-Sofa (pictured)** | Loaned by: Verde Design Studio | www.verdedesignstudio.net | **Upholstery** | Coconut Cloth, No. 345-1 Milkweed from "e" collection | Gift of: Brentano textiles | www.soliloquytx.com | Recycled yarns and eco-friendly fibers.

● **Accent pillows** | Verde Design Studio | Filled with 100 percent American down and feathers | Covered in Pollack | Winter pillows – longitude menswear | Summer pillows – longitude candy shop | www.pollackassociates.com | climatex wool and recycled wool.

● **Janika ottoman** | Gift of: Verde Design Studio | www.verdedesignstudio.net | **Upholstery** by: Brentano | Galaxy Eris | www.brentanofabrics.com | Biodegradable, non-off gassing faux leather.

● **Paint** | Clay.02 | Gift of: Yolo Colorhouse | www.yolocolorhouse.com | No-VOC, no off-gassing of toxins.

● **Carpet** | Rake Me Over, Palm | Gift of: FLOR | www.FLOR.com | Because each floor tile is separate, cleaning is easy: only the tiles that are soiled need to be washed. Uses non-offgassing, recycled materials. Greener than traditional carpeting that harbors mold and mildew.

● **Gateway Motorola VIP 1216 IP Set Top** | Gift of: Motorola | Advanced interactive set top that can be interconnected via a home IP network to provide entertainment in multiple rooms and share content from a connected DVR. | www.motorola.com



Dining Room

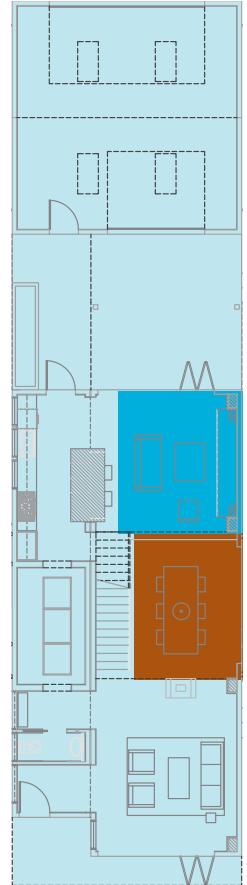
● **Ash dining table** | Loaned and handcrafted by Terry Karpowicz | www.verdedesignstudio.net | Ash table made with wood from a fallen tree, finish is low-VOC.

● **Mid-Century modern dining chairs** | Loaned by: Verde Design Studio | www.verdedesignstudio.net | From resale shop (a great way to recycle!).

● **Cement bowl** | Loaned by: Concrete Age Artworks, Inc. | www.concreteageartworks.com | Made from cement countertop over-pours.

● **Chandelier (pictured)** | Loaned by: Ted Harris | Edison Twins | Made from recycled lightbulbs.

● **Tea trolley** | Loaned by: Celia Greiner Woodworking | Made of sustainably sourced walnut and cork (eco-friendly oil finish).



Second Floor

● **Bamboo flooring** (pictured) | SYNERGY Prefinished Strand Bamboo Flooring, color: Java | Gift of: Teragren® commercial and All Tile, Inc. | www.teragren.com | www.alltile.com | Highly renewable material. It grows quickly – capable of growing more than 90 feet in just a year. Teragren is the nation's leading manufacturer of environmentally friendly bamboo flooring, panels and veneer.

● **Hallway book shelf** | Custom | Maple veneer, iceberg paint | Crestwood Cabinetry Inc. | Gift of: McNulty Design | www.mcnyultydesign.net | Built with FSC-certified maple.

● **Magazines and books** (pictured) | *Wired* magazines from the last 15 years. | www.wired.com | Recommended green reading from the Chicago Public Library, visit www.msichicago.org/smarthome/read.

● ● **Cypress tables** | Designed by: Celia Grenier | Locally sourced reclaimed cypress. No-VOC finish.

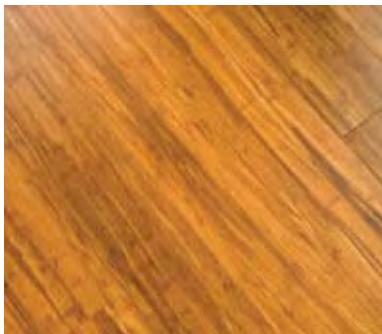
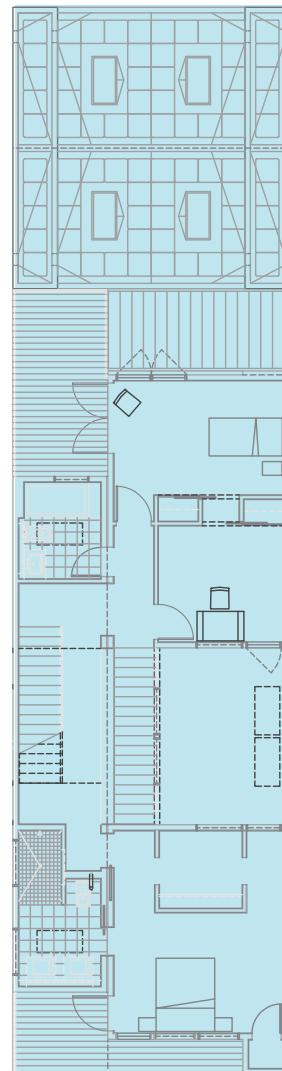
● ● **Reading light** | VESSEL light fixture with LED lights in a vase | Gift of: MKD | www.mkd-arc.com/products/vessel | LED can be 90 times more efficient than incandescent lights.

● **Spirit Poles** | Loaned by: John Geldersma | Painted poles salvaged from a river in New Orleans courtesy of Jean Albano Gallery..

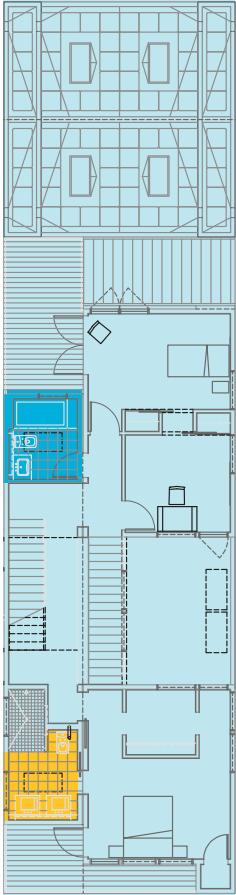
● **Roomba** | iRobot Roomba 560 | Gift of: iRobot Corp. | www.iRobot.com | Robotic vacuum that cleans where and when it's most convenient for you. Schedule to clean whenever you want freshly cleaned floors. Roomba navigates and vacuums the entire floor, under and around furniture and along walls, and then automatically returns to its homebase to charge.

● **Ova lounge and ottoman** | Loaned by: S² Design LLC | www.s2designonline.com | Certified Baltic birch plywood with no-VOC finish.

Artwork | Loaned by: Tim Anderson onart.com.



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Bathroom 2

- **Shower and floor tiles** | Squak Mountain Stone countertop slab, color: natural | Gift of: Tiger Mountain Innovations, Inc. | www.tmi-online.com | Handmade from recycled glass, paper and low-carbon cement.
- **Countertop** | Gift of: Terra Green Ceramics | www.terragreenceramics.com | Made with 55 percent recycled glass content and qualify for LEED certification points.
- **Towels** | Silver | Gift of: Viva Terra | www.vivaterra.com | Made of bamboo.
- **Sink** | Kohler K-2214-0 Ladena™ Undercounter Lavatory, Color: White | Gift of: Kohler | www.us.kohler.com | Faucet | Kohler Stillness® Widespread Lavatory Faucet (polished chrome) | Low-flow faucets save gallons of water per use!
- **Cabinets** | Crestwood Cabinetry | Maple veneer | Gift of McNulty Design Group, Inc | www.mcnultydesign.com | Made from FSC-certified wood.
- **Medicine cabinet** | Kohler Purist | 24" x 36" mirrored cabinet | Gift of: Kohler | www.us.kohler.com.
- **Tub and shower** | Tea-for-Two® 5.5' Whirlpool, white | **Tub faucet** | Stillness® wall-mount bath spout, polished chrome | 20 percent reduction in water consumption | **Showerhead** | MasterShower Ecoefficient showerhead | **Handshower** | **Shower valve** | Stillness® Thermostatic valves in polished chrome | Gifts of: Kohler | www.us.kohler.com | Handshower provides 20 percent reduction in water consumption.
- **Toilet** | Kohler Persuade® | two-piece elongated toilet (white) | Gift of: Kohler | www.us.kohler.com | A two-button actuator offers .8- or 1.6-gallon flush options for light or bulk waste, saving as much as 6,000 – 25,000 gallons of water over traditional 1.6- or 3.5-gallon toilets.
- **Spa towels** | Organic cotton, ivory | Gift of: Viva Terra | www.vivaterra.com | 100 percent certified organic towels. Made without heavy metal dyes, chlorine bleach or any synthetic finishing agents.
- **Aqus™** | Gift of: Arid Solutions Inc. | www.aridsolutionsinc.com | Gravity and a small pump move water from the vanity to the toilet via small tubing. If there is not enough water in the reservoir the regular water supply will take over for flushing or if the reservoir is full any additional water will go out the regular piping.

Master Bath

- **Floor tile** | Frost | Gift of: Terra Green Ceramics | www.terragreenceramics.com | Made with 55 percent recycled glass content and qualify for LEED certification points.
 - **Sinks/countertops** | Gift of: Michelle Kaufmann Designs and Concreteworks | www.mkd-arc.com/products/mkpure | Made of fly ash concrete recycled toilet/porcelain aggregate.
 - **Cabinets** | Oak veneer, espresso stain | Gift of: Crestwood Inc., donated by McNulty Design | www.mcnultydesign.net | www.mcnultydesign.net | FSC-certified oak veneer.
 - **Faucets** | Stillness® Widespread Lavatory Faucet | Gift of: Kohler | www.us.kohler.com.
 - **Medicine cabinet** | Kohler Purist 24" x 36" mirrored cabinet | Gift of: Kohler | www.us.kohler.com.
 - **Shower tiles** (pictured right) | Blazestone Subway, 3.5"x7.5". Cloud White matte finish | Gift of: Bedrock Industries | www.bedrockindustries.com | Made of 100 percent recycled post-consumer glass.
 - **Showerhead** | Purist Ecoefficient showerhead | Gift of: Kohler | www.us.kohler.com | 30 percent reduction in water consumption without sacrificing performance.
 - **Toilet** | Persuade | Gift of: Kohler | www.us.kohler.com | A two-button actuator offers .8- or 1.6-gallon flush options for light or bulk waste, saving as much as 6,000 – 25,000 gallons of water over traditional 1.6- or 3.5-gallon toilets.
- Toilet tissue holder** | Stillness | **Towel ring** | Stillness
Towel bar | Stillness 18" | **Robe hook** | Stillness | Gifts of: Kohler | www.us.kohler.com
- **Spa towels** | Silver | Gift of: Viva Terra | www.vivaterra.com | Made of bamboo.
 - **Segmental Body Composition Monitor** | Gift of: Tanita Corporation of America | www.thecompetitiveedge.com | Full body analysis including weight, body fat, water, muscle and more. Enables user with 36-month, paperless progress tracking.

Master Bedroom

● Accent wall | Water.03 | Gift of: Yolo Colorhouse | www.yolocolorhouse.com | No-VOC, no off-gassing of toxins.

● Natural rubber latex mattress with organic cover | Size: Full | Gift of: Bower Natural Bedding | www.bownaturalbedding.net.

● Platform bed | Gift of: Verde Design Studio | www.verdedesignstudio.net | Upholstered in Eco Wool | Gift of: Brentano Inc. | www.brentanofabrics.com.

● Throw | Bamboo Cashmere | Gift of: Brentano Inc. | www.brentanofabrics.com | Made of 100 percent bamboo.

● Duvet cover and shams | Pattern: Bark Cloth, Color: Morning | Gift of: Brentano Inc. | www.brentanofabrics.com | 100 percent recycled polyester

● Sheets | Gift of: Crate & Barrel | Organico | www.crateandbarrel.com | Formaldehyde-free, 100 percent certified organic.

● Side tables (pictured) | Loaned by: Scrapile | www.scrapile.com | Repurposed wood scraps collected from local waste-stream.

● Closet organizers and storage cabinets | Gift of: California Closets | www.californiaclosets.com | Italian-made particle board with melamine finish rated E1 environmental.

● Meditation crescent and eye pillow | Gifts of: Natural High Lifestyle | www.naturalhighlifestyle.com | Natural materials include buckwheat, hemp, silk and lavender.

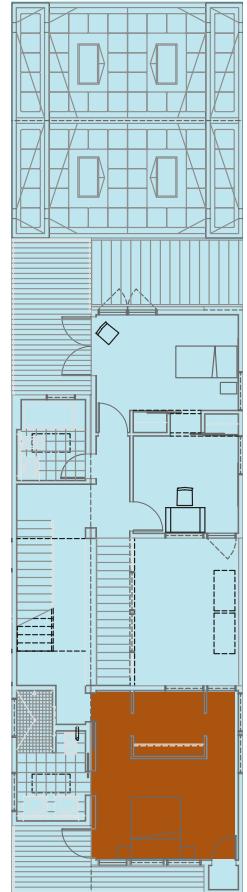
● Men's and women's clothing | Gift of William Good | www.shopwilliamgood.com | Refurbished clothing line uses post-retail recycled products that are reworked, redesigned then resold.

Artwork | "Air and Water" | Loaned by: Tim Anderson | www.timandersonart.com.

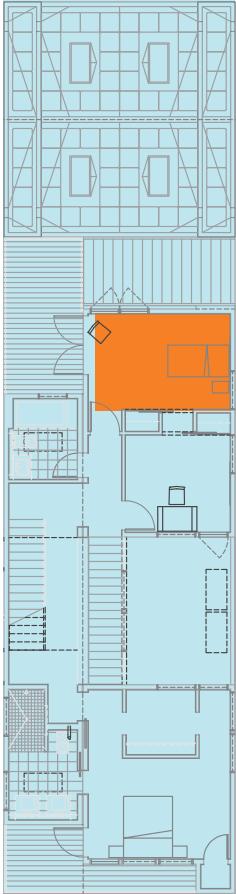
●● Sleeptracker Pro | www.sleeptracker.com | The watch sends a record of the user's movements during sleep to a computer to help build better habits.

● Mobile Device MOTORAZR 2™ V8 | Gift of: Motorola | The impossibly sleek and thin profile of this phone packs a powerhouse of features into a strong stainless steel structure and features CrystalTalk™ to improve clarity in noisy environments. | www.motorola.com.

● Amazon Kindle | Amazon | www.amazon.com | Wireless, portable reading device.



- Smart Design
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Child's Bedroom

- **Bed** | Organic Wool Mattress | Gift of: Bower Natural Bedding, Chicago | www.bownaturalbedding.net | Made entirely of wool upholstery.
- **Pillowcases and duvet cover** | Gift of: Natural High Lifestyle | www.naturalhighlifestylestore.com | hemp/cotton, efficiently-created.
- **Sheets** | Organico | Gift of: Crate & Barrel | www.crateandbarrel.com | Formaldehyde-free, 100 percent certified organic.
- **Wallcoverings** | Hudson | Gift of: Innovations USA | www.innovationsusa.com | Contains no heavy metals, pvc or harmful solvents. Created from high density wood pulp.
- **Bulldog cabinet** | Loaned by: Celia Grenier Woodworking | Made of sustainably sourced walnut (eco-friendly finish).
- **TriChair** | Designed, crafted and loaned by John Kriegshauser | A copyrighted, ultralight wooden chair sustainably made of hardwood dowels and rawhide leather. Completely biodegradable.
- **LEGO® MINDSTORMS® NXT Robotic Toolset** (pictured) | Gift of: Lego | www.LEGOmindstorms.com | Toolset helps kids create the smartest, strongest and most advanced LEGO® robot ever.
- **Pogo stick** | Extreme Pogo Stick (V2) | Gift of: Vurtego | www.vurtego.com | Infinite mileage, people-powered entertainment and transportation.
- **Kid-Tough® Digital Camera** | Gift of: Fisher-Price | www.fisher-price.com | This award-winning, best-selling kid-camera is tough and waterproof.
- ● **XO laptop** (pictured) | Gift of: One Laptop Per Child | www.laptopgiving.org | Real-world design, extremely durable, brilliantly functional, energy-efficient, responsive and fun. Program provides low-cost laptops to children in developing countries. Works with renewable power sources and is recyclable.



- **Pleo Robotic Dinosaur** | Gift of: UGOBE, Inc. | www.pleoworld.com | Pet of the future, Pleo emulates appearance and behavior of one-week-old infant. Adapts from experiences through artificial intelligence.
- **R2D2 trashcan** | www.thinkgeek.com
- **Library books** | From the Chicago Public Library's 2008 *Read Green, Live Green* Summer Reading List | For a complete listing of books please visit www.msichicago.org/smarthome/read.
- **Built-in desk** | Gift of: California Closets | www.californiaclosets.com | Meets E1 standard, Bellissima White.
- ● **Trek bike** | Gift of: Trek Bikes | www.trek-bikes.com/us | Kid's bike used to generate power for the video games.



Home Office

● **Chicago Park Desk** | Designed by: Terry Karpowicz | Donated by: Verde Design Studio | www.verdedesignstudio.net | Chicago Park Desk | Salvaged black walnut from a fallen tree in the Chicago Park District.

● **HYmini™** | Gift of: MINIWIZ Sustainable Energy Development, Ltd. | www.hymini.com/eshop/index.html | First and only, hand-held, hybrid wind and sun-fed “green platform” universal charging device, suitable for most digital gadgets.

● **Weather beacon and 7-day forecaster** | Gift of: Ambient Devices | www.ambientdevices.com | Changes color depending on weather patterns, giving users the forecast at a glance.

● **Botanicalls** | Gift of: Botanicalls | www.botanicalls.com | Digital sensors in the houseplant gives the family a call when they need water.

● **Mobile Device MOTO Q™ 9h** | Gift of: Motorola | The Moto QTM 9h uses High Speed Downlink Packet Access (HSPDA) technology for lightening fast speed and access to personal or corporate e-mail and instant messaging. | www.motorola.com.

● **Baseball ScoreCast** | Gift of: Ambient Devices | www.ambientdevices.com | Automatically tracks every game from Spring Training to the All-Star Game, to the World Series.

Garage

● **Car (pictured)** | Honda Civic Hybrid | Loaned by: American Honda Motor Co., Inc. | civic.honda.com | As the most fuel-efficient car in its class*, the Honda Civic Hybrid helps you save money on fuel with up to 45 hwy/40 city mpg*. The air benefits from its status as an Advanced Technology Partial-Zero Emission Vehicle (AT-PZEV)†. And all along, you get to enjoy Civic's top-flight style and comfort.

*Based on www.fueleconomy.gov and 2008 EPA-estimated 40 city/45 hwy mpg. Use for comparison purposes only. Actual mileage may vary. †AT-PZEV-rated by the California Air Resources Board (CARB).

● **Home theater speakers** | Three-way bass reflex tower

speakers | Two-way center channel speaker | Two-way dipolar surround sound speaker | Front- and rear-firing subwoofer | Gifts of: Jamo | www.jamo.com | All products are RoHS (restriction of hazardous substances)-compliant, designed to help eliminate e-waste (the disposal of electronics). Jamo uses recyclables whenever possible in components and packaging.

● **Multimedia storage** | Life|media 100 | Gift of: Microsoft | www.life-ware.com | Provides 500GB to 4TB of storage for digital music, movies, pictures and recorded TV as well as instant access to Life|ware home control.

● **Garage doors** | Gift of: Overhead Door | www.overheaddoor.com | Having glass doors on two sides provides more natural light. The garage was designed for flexible use in the future when hopefully the average family will not have need to store two cars.

● **Bike** | STRiDA 5.0 | Gift of: STRiDA AREAWARE | www.strida.us | Most advanced folding bike on the market. Cycling is one of the greenest modes of transportation, and this model is very space efficient.

● **Outdoor carpeting** | Seeing Spots™ Color: Parakeet | Gift of: FLOR | www.flor.com | Made of recycled materials and low-VOC.

● **Bean bags** | Espresso | Gift of: Bean Products | www.beanproducts.com | Made from hemp.

● **Doors and Skylights** | Designer Series | Gift of Pella Windows and Doors, Inc. | www.pella.com.

● **Digital entertainment system** | OMS-BX3000 | Gift of: Okoro Media Systems, Inc. | www.okoromedia.com | Uses eco-friendly Green Power™ hard drives from Western Digital toward Energy Star 4.0 compliance.

● **Lawn mower** | Gift of: Neuton | www.neutonpower.com | Battery-powered, eco-friendly lawn mower.



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Landscaping and Vegetable Garden



Landscaping and Vegetable Garden

The Museum collaborated with Jacobs/Ryan Associates Landscape Architects, the University of Illinois Extension and Openlands to develop a native and sustainable site landscape for *Smart Home*. From the ground up to the roof, *Smart Home's* landscape design demonstrates an eco-friendly aesthetic with systems that sustain and replenish the environment: green roofs, Ipé decking, rain barrels, bioswales, porous paving and rain gardens. Prairie, dune and oak savannah plantings recall our region's past and working gardens present food production, indoor climate control and water recycling in action.

The landscape is carefully designed and managed to conserve and protect natural resources.

- Native plants have extensive root systems and are well-adapted to our climate. Moreover, they add year-round beauty and attract beneficial insects.

- Green roofs reduce energy costs; decrease the urban heat island effect by cooling air temperature and slow stormwater run-off.
- Permeable pavements, rain gardens and bioswales (shallow depressions in the ground) ease water run-off into surrounding streams and lakes and enable slow, healthy seepage into the soil.
- Rain barrels harvest rainwater to irrigate plants, so we use less drinking-quality water.
- Fresh, home-grown vegetables and herbs are available three seasons of the year.
- Yard and garden waste is composted and added to the garden as a rich soil conditioner.
- Organic mulch minimizes weed invasion, converts moisture, reduces soil temperature fluctuations, protects root systems and keeps the vegetables clean.
- Space is maximized via trellises, caging and staking tomatoes, container gardening,

and mixing fast-maturing crops with slower growers. The result: greater yield in a smaller space.

- Chemical applications are avoided by starting with healthy seed and transplants, providing optimal growing conditions, scouting for unwanted pests, and removing dead and diseased plants.

University of Illinois

University of Illinois Extension educators train volunteer Master Gardeners to provide gardening programs and horticultural activities to educate the public. U of I Master Gardeners planted and maintain these gardens and are available to answer your gardening questions. For more information, call your local Extension Office or visit us on the web at www.urbanext.uiuc.edu.

Jacobs/Ryan Associates

With strong midwestern sensibilities, Jacobs/Ryan has provided thoughtful landscape architectural consulting services for more than three decades. | www.jacobsryan.com

Openlands Native Habitats Program

Openlands is dedicated to preserving and enhancing public open space in northeastern Illinois. The organization's Urban Greening program supports community- and school-based greening within Chicago. | www.openlands.org

● ● Green roof | GreenGrid® by Weston Solutions, Inc. | www.greengridroofs.com
| Modular green roof system delivered pre-planted in 100 percent recycled modules. Green roofs save energy and reduce air and water pollution.

● Coordinated landscaping installation, shrubs, perennials and native plant plugs | Gift of: Christy Webber Landscapes | www.christywebber.com

● Porous paver system | Gift of: Unilock | www.unilock.com | Installation Gift of: Clauss Brothers, Inc. | Creates green spaces in every aspect of the horticultural world.

Outdoor Living

The *Smart Home's* outdoor living spaces are an important element in the home's overall sustainable design. One of the keys to sustainable design is designing to use less—less space, less energy, fewer materials—and blurring the line between the indoors and outdoors helps do just that. The home's interior rooms “borrow” space from the outdoors so that they feel larger. Indoor and outdoor rooms open onto each other to create one big, connected living space. The roof decks maximize all the outdoor space the home has to offer. We've created still more livable outdoor spaces by utilizing the home's exterior walls and trellises. Sustainable design isn't just about minimizing our impact on the environment; it's also about enjoying it.

● Outdoor furniture (pictured) | Large extension table, dining chair and pad (palm), dining bench and pad (palm), four-piece sectional and cushions (cocoa brown), rice-paper pillow (Trovata), Bali floral pillow (Trovata), Deep Sea Pillow (Trovata), lounge chair and cushion (cocoa brown), ottoman and cushion (cocoa brown), side table, round coffee table, chaise and cushions (cocoa brown) | Gifts of: Crate & Barrel | www.crateandbarrel.com | Furniture made of plantation-grown teak, supported by the Tropical Forest Trust (TFT)

● Meandering Modular Benches | Loaned by: College of Architecture, Illinois Institute of Technology, Architecture & Furniture, Spring 2006 | Unfinished clear cedar from sustainably managed forests.

● Roof deck supports and ipê wood tiles | Gift of: Bison Desk Supports | www.BisonDeskSupports.com | Constructed from select cut Brazilian ipê which has been harvested in an environmentally responsible method designed to preserve the economic viability of rain forest hardwoods.

● Fire Cube | Gift of: Sycamore Canyon, LLC | www.sycamorecanyonlandscape.com | Outdoor fire pit that runs on natural gas or propane. Constructed of iron with a natural rust patina.

● Roof decking | Origins 5/4 x 6, Winchester grey | Gift of: Trex | www.trex.com | Made of reclaimed plastic and scrap wood, which would otherwise be in a landfill. Maximizes outdoor spaces.

● Global Sun Oven® | Gift of: Sun Ovens International, Inc. | www.sunoven.com | Solar bakes, boils or steams food. Keeps home cool in the summer by keeping cooking heat outside.



● AsphaltEdge | Gift of: Permaloc Corporation | www.permaloc.com | Permanent, sustainable aluminum edging made from recyclable aluminum.

● Calamagrostis “Karl Foerster” aka Feather Reed Grass | Echinacea Pixie Meadowbrite™ | Sedum for Green Walls | Aronia melanocarpa “Elata” | Gift of: Midwest Groundcovers, LLC | www.midwestgroundcovers.com.

● Trees and shrubs | Gift of: Kaneville Tree Farms, Inc.

● Bur Oak and Black Hill Spruce trees | Gift of: GRO Horticultural Enterprises, Inc. | www.grohort.net

● Native wetland and prairie plugs, including asclepias tuberosa, Aster novae and others | Gift of: JFNew | www.jfnew.com | Native plants and seed for sustainable landscapes.

● Native plants and perennials | Gift of: Possibility Place Nursery and Midwest Groundcovers | www.possibilityplace.com | Quality native plants grown from seed locally

● Earthboxes | Gift of: The Growing Connection | the-growingconnection.org | sponsored by *Wired* magazine.

● Rustic Granite (decomposed) decorative stone | Gift of: Town & Country Landscape Supply Co. | www.hesod.com

● Bioswale rain garden materials | Gift of: Lake Street Landscape Supply | www.lakestreetlandscape-supply.com | Blend of growing materials provides optimal drainage and soil conditioners to encourage plant health and sustainability.

● Soil | PM 35 planting mix | Gift of: Midwest Trading Horticultural Supplies, Inc. | www.midwest-trading.com | Blended with green waste compost and pine bark.

Master Gardener Smart Home Garden Blog | web.extension.uiuc.edu/cook | Follow the development of the vegetable garden throughout the growing season.



- Smart Design
- Material Efficiency
- Energy Efficiency
- Water Efficiency
- Healthy Environment

Eco-tips

Ways to leave a smaller eco-footprint inside and outside your home. Visit www.msichicago.org/smarthome for more!



Smart Design

Place furniture near natural light sources – working near the window means less need for electric lights.

In the summer, open windows for cross breezes, and install window and ceiling fans instead of cranking on the AC. In the winter, change the direction of the ceiling fans to bring the warm air down.

Run-off can carry toxic chemicals into nearby lakes, rivers, streams. Encourage rain and snow water to seep into the ground rather than wash away. Use permeable materials like gravel and woodchips for walkways and borders.

Harness the power of the sun. Consider adding solar appliance charges, solar cookers and rooftop solar panels to your home.



Material Efficiency

Recycle! It's really easy and makes a huge difference. Visit www.illinoisrecycles.org to find more recycling information.

If every American recycled the morning newspaper, 41,000 trees would be saved

and 6 million tons of waste would stay out of landfills.

Recycling just one aluminum soda can saves enough energy to power your TV for three hours.

The energy saved from recycling one glass bottle could power a 100-watt bulb for four hours!

Plastic water bottles take 700 years to decompose in landfills.

If you are planning to purchase new materials for your home, consider bamboo, cork or natural linoleum flooring; FSC-certified wood cabinets; recycled glass tiles; recycled paper countertops; and many other readily available, eco-friendly materials.

Bring your own cup to your favorite coffee shop, or if you are eating in, ask for a "for-here" mug. It makes enjoying a hot brew so much more civilized; Plus, if you enjoy one cup a day, that's 365 less cups in the landfill. Tell a friend to do the same. Watch the math!

Compost fruit and veggie scraps,

paper scraps, coffee and tea grounds, eggshells and more. It's easy, saves garbage from the landfill and helps your garden to grow!

Buy vintage/recycled clothing. Many designers are creating hot new fashions with re-used and recycled materials. Shop thrift shops. Donate your gently used items.

Use your library card. Imagine ... all the books you can read for FREE! Save money and paper.



Energy Efficiency

In terms of energy efficiency, microwaves are better than toaster ovens; toaster ovens are better than regular ovens. Reduce cooking energy by as much as 80 percent.

Unplug! Just keeping your cellphone, TV, and DVD players plugged in wastes 5 percent of all the energy Americans use each year.

Replace those traditional incandescent bulbs if you haven't already. You'll save 140 pounds of carbon emissions a year, and compact fluorescents hardly ever need changing. Or consider LED lighting as well, an even greener lighting option.

For each degree you turn down your thermostat in the winter, you save about one percent on what it costs to heat your home and you trim your carbon emissions. Start by kicking it down a notch while you sleep and are away from the house. Do more if you can.

Upgrade the old fridge or freezer in your basement (the one you use to stock up on beverages or sale items). The one in your kitchen (if it's less than 10 years old) is probably not so bad, but the outdated one is a huge energy hog.



Water Efficiency

If you do nothing else, do this. Turn off the water when you brush your teeth and save around four gallons each person each time.

Use the dishwasher (8.7 gallons per load) instead of hand-washing (as much as 20 gallons). Be sure to use a full



load and scrape instead of rinsing.

Fix that leaky toilet or sink. You may be losing as much as 200 gallons a day. If you must water the lawn, wait until night or early morning so it won't evaporate during the heat of the day. Use soaker hoses instead of traditional sprinklers for deeper saturation. Give gardens and lawns a longer deeper drink, less often.

Skip red meat occasionally. It takes more water to produce one pound of beef than the average American uses in showers for an entire year.



Healthy Environment

Switch to natural cleaners that you can make yourself. They are less expensive than store-bought, clean just as well and are safer for your family and pets. All you need is a ready supply of white vinegar, lemon juice, baking soda, borax and essential oils for fragrance.

For the next paint job or home project, look for low- or no-VOC paints, thinners, carpet adhesives, etc.

Recycle hazardous waste and electronics appropriately. Check www.illinoisrecycles.org for more information.

Plant a tree. Check for species native to your area. One mature tree cleans up after 13 cars!

Ride public transportation. Visit Chicago Transit Authority (CTA) trip planner at www.transitchicago.com/maps/tripplanner.html.



Glossary

Biodegradable A product or material made from plant or animal material that, after usage, is broken down quickly by other living organisms. Eco-tip: Biodegradable products are better for the environment compared to their plastic counterparts, and many biodegradable alternatives are now available such as plastic bags, servingware, etc.

Bioswale A pocket or indentation in the ground used to collect water that would otherwise run off into nearby streams, rivers and lakes.

Carbon Footprint The environmental impact we have depending on the choices we make such as raw-material selection, energy selection, transportation, etc.

CFL Compact fluorescent light bulb. Eco-tip: In CFL bulbs, gas inside the bulb emits light when a chemical reaction takes place. CFLs use 75 percent less energy than traditional (incandescent) bulbs and CFLs last up to 10 times longer.

Compost The act of recycling organic materials for fertilizer. Eco-tip: Instead of throwing away vegetable peels, coffee grounds, tea bags, eggshells and paper, these scraps can be composted along with lawn clippings, fall leaves, etc. into

a rich soil supplement. Visit www.compostguide.com for more information.

Cradle-to-Cradle A term used to describe a material or product that is recycled into a new or similar product at the end of its intended life.

Cradle-to-Grave A term used to describe a material or product that is dumped in a landfill or burned at the end of its intended life.

Emission The release of any gas, particle or vapor into the environment.

ENERGY STAR A U.S. government sponsored program designed to help consumers save money and energy. Eco-tip: Energy Star appliances, products and materials meet strict energy efficiency guidelines and save you money. Look for the Energy Star label next time you buy an appliance!

Environmentally-friendly A term often used to designate a product or process that has a reduced carbon footprint when compared to other products or processes.

Fly Ash The leftover particles resulting from burning coal; often used as a filler material in concrete to cut down on raw material usage.





FSC Forest Stewardship Council is an international not-for-profit organization that seeks to find solutions to problems created by irresponsible forestry practices and to reward responsible forest management. Eco-tip: To become FSC certified, companies must comply with the 10 Forest Management Principles. Log onto www.fsc.org to find out more about the FSC principles.

Greenhouse Effect Rise in temperature that the Earth experiences because certain gases in the atmosphere trap energy from the sun.

Greenhouse Gases (GHG) Gases that trap heat in the atmosphere such as carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O).

Grey-water Post-bath or sink water used to flush toilets and for landscape watering.

LED Light emitting diode. Eco-tip: Compared to traditional incandescent bulbs, LEDs are incredibly energy efficient and can last up to a million hours.

Modular An architectural system in which separate components (like rooms) can be easily added or removed from the overall structure.

Net metering Programs that provide an incentive for customers to invest in renewable energy. Customers can generate their own energy to offset consumption; meters turn backwards when energy generated exceeds electricity used. Visit www.eere.energy.gov/greenpower/resources/maps/ for more information and state-by-state availability.

Off-gas The evaporation and release of chemicals from materials (often building and home furnishing materials) that lead to unhealthy indoor living environments. For example, traditional paints, stains, carpets and flooring release toxic chemicals long after they are installed.

Organic Products that are commonly produced without the use of pesticides, herbicides and other harmful chemicals.

Photovoltaic (PV) Cell or devices that directly convert sunlight into electricity.

Real-time pricing A utility monitoring and billing structure whereby consumers are billed for the power they use on hourly market prices. This structure enables consumers to use power during non-peak times to save money. ComEd

currently offers this program to consumers. Visit www.exeloncorp.com/Comed-Care_Main/ComedCare/learn/RealTimePricingPrg/ for more information.

Renewable energy energy from sources that regenerate or reoccur such as wind or sunlight.

Sustainability Practice of making products or materials using resources that can be quickly replaced or replenished.

Urban Heat Island Effect The phenomenon whereby metropolitan areas are significantly warmer than surrounding areas. This temperature increase occurs because cities are composed of more artificial surfaces such as asphalt and concrete, and these materials easily absorb the sun's heat, causing the temperature of the area to rise.

VOCs Volatile organic compounds (found in paints and carpet glue) are the leading cause of indoor air pollution. Eco-tip: Look for no-VOC or low-VOC paints and other home products to decrease the amount of pollution inside your home. Go to www.epa.gov/iaq/voc.html to learn more about VOCs.

Eco-Resources Guide

General Publications:

America from the Air: A Guide to the Landscape Along Your Route by Daniel Mathews, James S. Jackson

Farewell, My Subaru: An Epic Adventure in Local Living by Doug Fine

The Green Book: The Everyday Guide to Saving the Planet One Simple Step at a Time by Elizabeth Rogers and Thomas M. Kostigen

Green, Greener, Greenest: A Practical Guide to Making Eco-Smart Choices a Part of Your Life by Lori Bongiorno

Green Living, E/The Environmental Magazine

Green Remodeling: Changing the World One Room at a Time by David Johnston and Kim Master

Here Comes Everybody: The Power of Organizing Without Organizations by Clay Shirky

It's Easy Being Green: A Handbook for Earth-Friendly Living by Crissy Trask

The Lazy Environmentalist by Josh Dorfman

Makers: All Kinds of People Making Amazing Things in Garages, Basements, and Backyards by Bob Parks

Prefab Green by Michelle Kaufmann
The Ten Most Beautiful Experiments by George Johnson

Wired magazine

Alternative Energy

Illinois Clean Energy Community Foundation
www.illinoiscleanenergy.org

American Solar Energy Society (ASES)
www.ases.org

American Wind Energy (AWEA)
www.awea.org

The Green Power Network
www.Eere.energy.gov/greenpower

Renewable Energy Access
www.Renewableenergyaccess.com

Net Metering/Energy offsets
www.eere.energy.gov/greenpower/resources/maps

Eco-friendly home resources

Michelle Kaufmann Designs
www.mkd-arc.com
blog.michellekaufmann.com

Test your carbon footprint at
www.myfootprint.com

Find out how you can reduce your own energy bill by typing in your zipcode at ENERGY STAR'S Home Energy Saver Web site: hes.lbl.gov/hes

www.thegreenguide.com

Leadership in Energy and Environmental Design (LEED)
www.usgbc.org/LEED

Healthy House Institute
www.hhinst.com

Indoors/Outdoors, an exhibit at the Chicago Architecture Foundation beginning June 2008, further explores living sustainably at home. By dismantling residential environments and examining their key emotional and physical components, the exhibition and programs encourage people to consider how "green" home life might become.
www.architecture.org

ENERGY STAR
www.energystar.gov

Gardening

A Taste of Gardening
www.urbanext.uiuc.edu/tog
My First Garden
www.urbanext.uiuc.edu/firstgarden/basics/index.html

Smart Home Garden Blog
Follow the development of the vegetable garden throughout the growing season
web.extension.uiuc.edu/cook

Container Gardening
www.urbanext.uiuc.edu/container

Chicago Home Composting
www.urbanext.uiuc.edu/homecomposting

Government Agencies

City of Chicago Green Homes Program encourages residential builders, developers and homeowners to use technologies, products and practices that provide greater energy efficiency, provide healthier indoor air, reduce water usage, preserve natural resources, improve durability and reduce maintenance, and reduce waste and pollution). *Smart Home* achieved 530 points, the highest preliminary rating of any home currently participating in the program! www.cityofchicago.org/Environment (click on Chicago Green Homes icon)

Environmental Protection Agency and Departments of the Environment
www.epa.gov/wastewise, www.doe.gov

Chicago Department of the Environment
www.cityofchicago.org/Environment

Chicago Center for Green Technology
www.cityofchicago.org/Environment (click on the Chicago Green Tech icon)
Take the City of Chicago's Environmental Pledge
www.earthmonthchicago.com

Public Transportation
Chicago Transit Authority (CTA) Trip planner
www.transitchicago.com/maps/triplanner.html

Reading Green
Chicago Public Library
www.chipublib.org

Recycling

www.illinoisrecycles.org and click on "E-cycling" for a list of collection sites

www.earth911.org
www.Chicagorecycling.org

Shopping Green

Watch your eco-footprint shrink at the *Smart Home's* Shop Earth (located in the Henry Crown Space Center). Feel good about your green purchases, including organic cotton tee-shirts, recycled plastic flowerpots, books about sustainable living and more!

For more extensive green resources (clothing and accessories, outdoor gear, travel, vehicles, energy alternatives, furniture and home décor, housecleaning, gardening, electronics, and much more!) www.lazyenvironmentalist.com/

Greenmaker
www.greenmakersupply.com

Resale Shops

chicago.citysearch.com/yellowpages/directory/Chicago_IL/110/524/page1.html

www.abstractpublishing.com/resale/north-suburbs.html

Water

American Water Works Association (AWWA)
www.awwa.org

Environmental Protection Agency Office of Water www.epa.gov/water

National Association of Regulatory Utility Commissioners
www.naruc.org

WaterAid America (providing healthy water to developing nations)
www.wateraid.org

United States Geological Survey (USGS)
water.usgs.gov

Wetlands International
www.wetlands.org

Xeriscape Colorado (drought-resistant gardening) www.xeriscape.org



Partners + Sponsors

Special thanks to *Smart Home* partners and sponsors

Partners

Michelle Kaufmann Designs (MKD)

Michelle Kaufmann Designs is a full-service architectural design firm that specializes in sustainable, innovative, high-quality architecture. Working under the belief that sustainable, well-designed buildings should be accessible to more people, MKD has simplified the process and chosen off-site modular technology as its means to create beautiful, eco-friendly homes and buildings. The goal of the company is to make it easier to for people to build green and live a more sustainable lifestyle. www.michellekaufmann.com

All American Homes®

Smart Home: Green + Wired is a modular home built indoors by All American Homes of Decatur, Indiana. In this precision engineered and climate-controlled environment, All American is able to build homes 60 percent faster and in a more environmentally friendly way than traditional site-built construction. Waste is reduced because much of the lumber arrives pre-cut, reducing the need to dispose of “cut offs” in the field. Drywall scrap is trucked to local farmers to use in preparing soil for planting keeping it out of landfills. Sawdust is made available for use as livestock bedding. These and other effi-

ciencies in time and materials can yield significant cost savings making homes more affordable. www.allamerican.com

Wired Magazine

For 15 years, *Wired* has been the first word on how technology is changing the world. Each month, the magazine delivers a glimpse into the future of business, science, entertainment, education, culture and politics. Under the leadership of editor-in-chief Chris Anderson, *Wired* has been nominated for an unprecedented seven consecutive National Magazine Awards for general excellence, winning the industry's top prize in 2005 and 2007. *Wired* magazine and *Wired.com* reach more than 10 million readers per month.

University of Illinois Extension

The University of Illinois Extension Horticulture, Environmental and Green Educator's assisted the Museum in transforming the *Smart Home: Green + Wired* into an eco-friendly oasis. With the help of its Master Gardeners, University of Illinois Extension help guests create green spaces in their own lives. As the flagship outreach of University of Illinois at Urbana-Champaign, U of I Extension offers educational programs to residents of all of Illinois' 102 counties—and far beyond via its award-winning Web site. Through learning partnerships like this, University of Illinois

Extension helps people put knowledge to work. Its educational programs aim to make life better, healthier, safer and more profitable for individuals and communities.

Sponsors

ComEd

ComEd is uniquely positioned to bring value to customers and the communities it serves, particularly when it comes to the environment. ComEd has been committed to environmental stewardship for some time. The utility's energy-efficiency and education programs are part of a comprehensive strategy to cut greenhouse gas emissions and reduce the carbon footprint of Exelon, its subsidiaries and customers. Through these programs, ComEd is helping customers conserve energy, save money and help the environment. Some examples of these programs include discounted compact fluorescent light bulbs, weatherization initiatives, energy-efficient curriculum and support for schools and the ComEdCARE.com Web site, where customers can conduct an online home energy audit, buy energy-saving products and access other helpful tips and tools. ComEd also continues taking steps to .reduce its own environmental impact through its fleet of biodiesel vehicles, Illinois prairie restoration program and paperless billing initiatives.

Peoples Gas

For more than 150 years, Peoples Gas (PGL) and North Shore Gas (NSG), the natural gas delivery companies for Chicagoland, have served the energy needs of more than one million residential, commercial and industrial customers in Chicago and 54 communities in Northeastern Illinois. PGL and NSG maintain a reliable energy supply to their customers and believe that the collective efforts of businesses and residents will help Chicago achieve its goal to be the greenest city in the nation. They encourage energy efficiency as a way to stem the effects of weather fluctuations and have adopted innovative green technology by using biodiesel fuels in company vehicles, hybrid vehicles to read customers' meters, and have invested more than \$1 billion in maintaining and upgrading the 6,000-mile natural gas delivery system. The companies continuously educate and raise customer awareness about conservation and energy reduction through their Web site and participation in community service projects.

American Honda Motor Co., Inc.

In 1974, Honda introduced the ingeniously simple Civic CVCC. World-changing for its low emissions and fuel efficiency, the CVCC demonstrated

Honda's spirited commitment to develop environmentally responsible technology. Many other firsts followed, such as the industry's first Ultra-Low-Emission Vehicle, America's first gasoline-electric hybrid vehicle and the world's first government-certified hydrogen fuel-cell car. This legacy of taking action based on the company's beliefs, and introducing new technology for the benefit of Honda customers can be seen in every product Honda makes. As stated by Honda: "If you could read our minds, you'd see dreams of a greener and more environmentally sustainable world."

Dominick's

Dominick's is proud to offer one of the most extensive lines of products certified organic by the USDA. The brand, *O Organics*™, includes more than 300 items available for breakfast, lunch, dinner and snacking. Dominick's parent company, Safeway, is one of the leaders in renewable energy. It became the only retail organization to join both the Chicago Climate Exchange and the California Climate Action Registry. Safeway saves more than 98 million kilowatt hours of electricity annually, reducing carbon dioxide emissions by almost 100 million pounds. Aware of its responsibility for managing paper and plastic waste, Safeway recycles

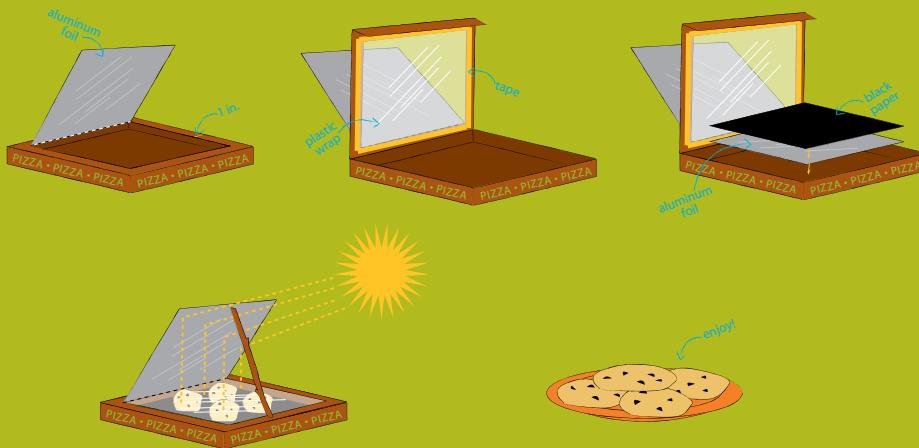
nearly 500,000 tons of materials each year. That's the equivalent of saving 8.5 million trees. Safeway investigates renewable energy sources, too. In 2006 Safeway purchased 97 million kilowatt hours of wind energy. As a testament to Safeway's company-wide environmental efforts, the EPA presented the company with the Power Purchase of the Year Award in 2005.

Motorola

Motorola has been at the forefront of communication innovation for 80 years. It develops technologies, products and services that make mobile experiences possible, including the broadband products demonstrated in the *Smart Home*. Motorola works to continuously improve the environmental profile of its products, considering energy, material content, packaging, upgradeability, waste, reuse and recycling. The company continues to reduce energy use in our products even as each device takes on additional functionality. Reducing the energy use of its products is one component of its climate change strategy, along with using more renewable energy and improving energy management at the company's operations. Motorola knows climate change is one of the biggest challenges facing the world, and it is committed to being part of the solution.



Family Fun with the Sun



Anyone who has had a sunburn knows the rays from the sun are very powerful and hot. But can these sunrays be used in other ways, like to bake a batch of cookies? Follow the steps below to create a solar oven and find out!

Supplies:

Cardboard Pizza Delivery Box
Scissors or Box Cutter
Aluminum Foil
Cling Wrap
Black Construction Paper
Stick or Dowel
Cookie Dough

1. Carefully make a flap in the top of the pizza box by cutting about an inch in from the edge on three sides of the box top. Bend the flap up; it should

stand up on its own. Cover the inside of the flap with aluminum foil. Aluminum foil reflects light. It will help the sunrays bounce around the oven.

2. Open the entire lid of the pizza box. Take a big piece of plastic wrap and cover the opening you made when you created the flap. Tape the plastic wrap down securely on the inside of the box top. You should now have an airtight window.

3. Line the bottom of the pizza box with a sheet of aluminum foil. Cover the foil with sheets of black construction paper. The aluminum foil helps sunrays reflect on the bottom of the oven, and the color black absorbs heat. Your oven will become nice and toasty!

4. Now you are ready to bake! Take your oven outside and place it in a sunny spot. Place a few small balls of cookie dough inside the oven. Change the angle of the flap until you can see lots of sunlight reflecting off the aluminum foil. Use a stick to prop up the flap at the right angle.

5. Keep an eye on your cookies and remove them from the oven when they look ready. Share your “sun” cookies with your friends and family. Enjoy!

On a very sunny day, a solar oven can reach 200°F! Other than cookies, what else could you make in your solar oven? Experiment with other foods and happy cooking!



A Home for All Seasons

Join us for four special workshops, one each season, geared to provide tips for more sustainable living. Experts share information and lead demonstrations. Programs are free with general Museum admission. Check www.msichicago.org/smarthome for program times, locations and up-to-the-minute information.

Spring — Saturday, May 10

Summer — Saturday, July 19

Fall — Saturday, October 25

Winter and Holidays — Saturday, December 13

The Museum thanks the following companies for their support.

3G Applied Technologies	Chicago Public Library	Honda HYmini™	Materious McNulty Design Group, Inc.	Overhead Door Pella Windows and Doors Inc.	Terra Green Ceramics
ABC Supply	Christy Webber Landscapes	Ilcynene Inc.	MEP	Peoples Gas	The Comer Foundation
ACM	Clauss Brothers, Inc	Illinois Institute of Technology	Michelle Kaufmann Designs	Permaloc Corporation	The Growing Connection
Acoustic Magic Inc.	Clean Air Counts	Inovateus Development LLC	Midwest Grounds-covers	Performance Engineering Group, Inc	Thunderbird Tiger Mountain
All American Homes®	ComEd	Innovations in Wallcoverings, Inc.	Midwest Trading Horticultural Supplies, Inc.	Pollack	Innovations, Inc.
All Tile, Inc.	Comfortmaker	Innovative Sleep Solutions	Mike Nagel	Possibility Place	Town and Country Landscape Supply
Ambient	ComfortPro Systems	iPort	Michael Nicholas Carpentry	Progress Lighting	Tracy Marks
Arid Solutions, Inc.	Concreteworks	iRobot	M.J Fogarty & Associates, Inc.	Publisher from Luxe Home Magazine Chicago	Trex Decking
Barrier Technology Company	Crate and Barrel	Iron Woods	Motorola Foundation	Sadhu Johnston	UGOBE, Inc.
Bean Products	Crown Boiler Co.	J.F. New Nursery	MuleHide	Sala	Unilock
Bedrock Industries	Cydus LLC	Jacobs/Ryan Associates	NanaWall Systems Inc.	Samsung	University of Illinois Extension
Bison Deck Supports	Daltile	James Cavallo, Ph.D.	National Door & Trim, Inc.	Seal-ect Services, Inc.	Vapro Shield
Botanicals	Designed Stairs, Inc.	Jamo	Natural High Lifestyle	Scott Sevon	Verde Design Studio, Ltd
Bower Natural Bedding	Dominick's	Kaneville Tree Farms, Inc.	NatureMill, Inc	Silver Springs	Viva Terra
Brentano Inc.	Eastlake Printing	The Kenai Shoe Company, Inc.	NeuStep	Soliloquy Textiles	Vurtego
Breville	Eco Top	Kohler	Norcon, Inc.	Somfy	Warmboard, Inc.
California Closets	Feeney Architectural Products	Lake Street Landscape Supply	Northern Illinois Fire Sprinkler Advisory Board	Springs Window Fashions	William Good
Casamonte Bath & Home	Fisher-Price	Lego Systems, Inc.	Okoro Media Systems	Stock Building Supply	Willco Wholesale Distr., Inc.
CBF	FLOR	Life ware	One Laptop Per Child	STRIDA	Wired Magazine
Cembonit Fiber Cement Panel Rainscreen	GE	Lighting Control	Openlands Native Habitats Program	Sun Ovens, Inc	Yolo Colorhouse LLC
Chicago Center for Green Technology	Graber®	Lucid Design Group		Tanita	
Chicago Department of the Environment	Great Lakes Plumbing and Heating	Lutron		Teragren® Commercial	
Chicago Green Homes Program	GreenGrid® by Weston Solutions, Inc.	Mapei			
	Georgia-Pacific				
	GRO Horticultural Enterprises, Inc.				

*list current as of 4/23/08

With this run of the *Smart Home: Green + Wired* Resource Guide the Museum of Science and Industry saved:

Trees	233.86 trees
Waterborne Waste	675.28 pounds
Water	99,336 gallons
Solid Waste	10,991 pounds
Greenhouse Gases	21,641 pounds
Energy	165,658,000 BTUs
Atmospheric Emissions	11,245 pounds or Crude Oil..... 5 barrels

Printed *Green* by Consolidated Printing using sustainable practices



57th Street and Lake Shore Drive, Chicago, Illinois
For more information or to buy tickets online
go to www.msichicago.org