





MICHELLE KAUFMANN'S FIVE ECO-PRINCIPLES

Michelle Kaufmann, architect of the *Smart Home*, identified five key principles that guide decisions regarding the home's design, construction and day-to-day operation. These ideals, incorporated throughout the home, demonstrate sustainability and environmental conscientiousness in action. | michellekaufmann.com



1. Smart Design Designed to “let the green in,” the home was built to human scale, using only what is needed, 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 and cameras, as well as track utility consumption in real time.



2. Material Efficiency The *Smart Home* was prefabricated, built in modules off-site. Crafted in a controlled indoor environment, the construction timeline was shortened and less energy and fewer resources were used versus the construction of a traditional home. Materials used are renewable or recycled: bamboo flooring, Forest Stewardship Council (FSC) certified wood and recycled glass tiles are a few of the low-impact choices.



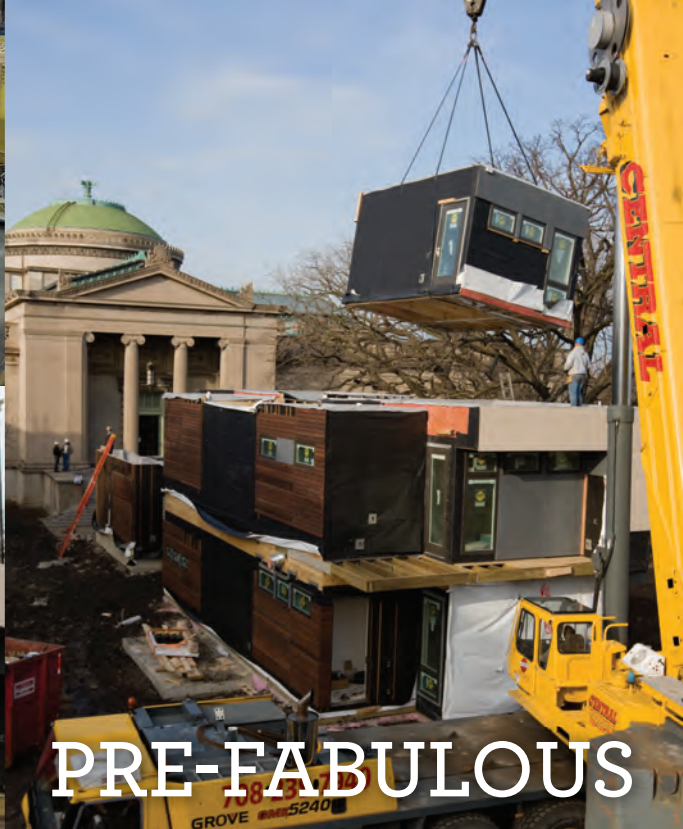
3. Energy Efficiency Throughout the home, materials and technology help save energy. The green roof helps insulate, absorb rainwater and minimize runoff. Huge windows, sliding doors and sunshades help light, heat and cool the house. Solar rooftop panels and a wind turbine generate much of the home's electricity. ENERGY STAR appliances and an array of energy-efficient technologies help save energy as well.



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



5. Healthy Environment The *Smart Home* was built by using non-toxic materials: no- or low-volatile organic compounds (VOCs) 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 with water recycling systems, native plants that adapt to climate conditions, permeable paving materials and more.



PRE-FABULOUS

All American Homes® is an expert and industry leader 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, and 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. | allamericanhomes.com

What is a modular home?

A modular home is comprised of complex “modules,” built off site 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 needs.

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 used for blocking or to heat the factory or employees’ homes. Drywall, wiring, sawdust, vinyl and other scraps are also collected and recycled.
- A home can be completed in several weeks in the factory, and finished on site in three-to-eight weeks. A site-built home of similar size could take four months or longer.
- Modular 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.

GO GREEN, SAVE GREEN!

You’ve got the power to save. We’ve got the ideas to help.

ComEd offers customers many options to help shrink their bills—and their carbon footprint!

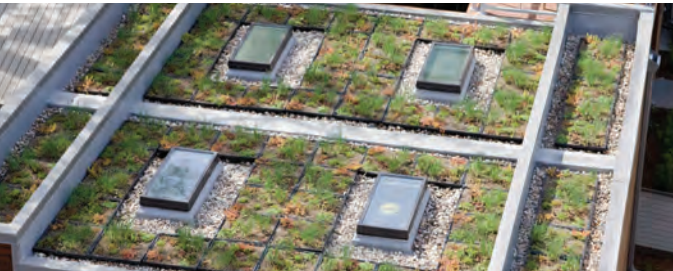
- Sign up for ComEd’s Fridge and Freezer Recycling Rewards program. Old fridge in the garage or basement? Now through May 31, get paid \$50 to have it picked up. ComEd will even ensure it’s recycled in an environmentally responsible way.
- Visit ComEd.com for more details about the programs mentioned above and to learn more tips, tricks, and tools to save energy and save money.

ENERGY

The *Smart Home* produces solar and wind energy to help reduce its dependence on fossil fuel power. When more energy is produced than needed, it is sent to the Museum’s main grid to be used to power your favorite exhibits!

Photovoltaic Film | Uni-Solar | Thin photovoltaic film absorbs the sun’s power and transforms it into usable energy. | uni-solar.com

Wind Turbine | Gift of: Southwest Windpower | Harnesses the wind and turns it into electric energy for the home. | skystreamenergy.com





INTERIORS BY SCOUT

Scout is an urban antique shop in the heart of Chicago's Andersonville neighborhood. Our approach to design is to take familiar elements—simple and unadorned—and make them feel interesting and sophisticated again. The Scout look is all in the mix: timeless utility and clean lines combined with second-hand comfort and urban freshness. It's less about a style and more about a feeling. One that makes you feel more at home than you ever thought possible.

Scout is celebrating its second consecutive year in designing a special look for the *Smart Home*, nestled in the shadows of the Museum of Science and Industry. We hope you enjoy uncovering the special items and touches that we have worked hard to bring to this project. On behalf of Scout and our creative and hard-working team of contributors, we are honored to have made this house a home.

Scout - Welcome Home.
Larry Vodak, Shopkeeper
scoutchicago.com



GADGETS BY GIZMODO

What makes the Smart Home so smart?

With a genius-level IQ, the *Smart Home's* home automation system monitors and manages the energy consumption of every room, and each appliance, from a single touch screen panel.

The system also multitasks, acting as a media server that can dispatch different songs throughout the house simultaneously through booming speakers that amazingly disappear into the ceiling. A master organizer, it functions as a digital dashboard—keeping your entire family's messages, calendars and photos together on one screen.

Because home automation takes care of keeping the *Smart Home* clean and green, homeowners get plenty of time left to enjoy its technological treats:

- The Cybertecture Mirror on the wall in the master bath is fog-resistant and waterproof, sure, but it also can deliver the day's time, temperature, news and traffic to you, right at that first peek in the mirror. It adjusts lighting for easy makeup application, keeps track of weight gain or loss, and even connects to friends on Facebook!
- In the family study, the Cryoscope cube actually shows exactly what to expect from the weather with one touch: It fetches weather data from the internet and then adjusts its temperature to the forecast.

- The best technology doesn't just simplify our lives; it beautifies as well. Herman Miller's Leaf Personal Light offers cutting-edge touch controls to turn it off and on and adjust intensity, while enhancing the home office aesthetic with smooth, clean lines.

- It isn't very often we encounter technology that is really, truly new. With the Lytro light field camera, the selling point is simple: you no longer have to worry about getting a shot in focus, because any part of the photo can be brought into focus after the fact.

- The SousVide Supreme water oven makes delicious meals using vacuum-sealed pouches, which are submerged in a water bath held at a precise temperature for hours, sometimes even days.

And that's just for the grownups. Peek in the boys' room and you'll find science experiments masquerading as toys, and toys imported from the future. The iPhone-powered AR.Drone is a kid's own private Air Force, while the Celestron smart telescope can identify more than 4,000 celestial bodies all on its own.

About Technology Partner, Gizmodo

Gizmodo is ecstatic to present the evolution of the house as you know it, taking the everyday items that we all take for granted and shining new (LED) light on them. That's not just progress. That's smart. | gizmodo.com

PRODUCTS THROUGHOUT SMART HOME

120-Drawer Console
Scout find | Salvaged
from the Field Museum
and restored by
Furniture Revival.

Join us on a tour of the *Smart Home*. Highlighted are some of the products, materials, furnishings, appliances and technologies that made the exhibit possible. For additional products and resources visit msichicago.org/smarthome.

Home Renovations | Gift of: Goldberg General Construction | All materials used in the renovations were sourced as sustainable and ecological to the environment, including recycled materials, low-VOC oils and natural materials. | ggcinc.net

Sivoia QED Automated Shading System | Gift of: Lutron | Shade system automates a home's window treatments, allowing one button to control every light and window treatment in a home. | lutron.com

Recessed LED Light Fixtures | Gift of: Progress® Lighting | Energy-efficient LED which can last 30,000 to 50,000 hours, as compared to incandescent bulbs' 800 to 1,000. | progresslighting.com

Interior Paint | Benjamin Moore Natura™ Paint | Gift of: Benjamin Moore | benjaminmoore.com/natura | Zero-VOC premium paint available in thousands of colors and exceeds LEED and Green Seal GS-11 standards.

QuietAir High Velocity Air Handler and Insulated Duct | Gift of: z Comfort Pro Systems | 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. | comfortprosystems.com

Windows, Doors and Skylights | Designer Series and motorized skylights | Gift of: Pella Windows and Doors, Inc. | Energy-efficient window and motorized skylight placement optimizes 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. | pella.com

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

Home Insulation | Spray-in place formula | Gift of: the Icynene Insulation System® | Reduces energy consumption by up to 50 percent, does not off-gas and eliminates or reduces other construction materials. | icynene.com

Stair Railing | Cable rail™ | Gift of: Feeney Architectural Products | feeneyarchitectural.com, cablerail.com

Roof Sheathing | Gift of: Barrier Technology Company | intlbarrier.com

Roof Membrane | Gift of: MuleHide | Light-colored membranes reflect sunlight and cool building interior for energy savings. | mulehide.com

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

Exterior Wood Siding | Gift of: Iron Woods | FSC-certified Ipê | Ipê wood is long-lasting and requires minimal maintenance. | ironwoods.com

Exterior Cement Siding | Gift of: Cembonit | Cement is a “green” material, plus the color is integrated into the material, rather than needing paint applied (long-lasting and low-maintenance). | cbf11.com



Table | Scout find and loaned by: Baldino Family | Restored by: Furniture Revival | Original maintenance table from a South Side steel plant.

Fire Protection Sprinkler System | Gift of: Northern Illinois Fire Sprinkler Advisory Board | Installed by: Great Lakes Plumbing and Heating. | homefiresprinkler.org

Stackable Axxis® Laundry | Gift of: BSH Home Appliances Corporation | Maximizes space and can be installed anywhere since it does not require any ducting or venting. | bosch-home.com/us

UV Stain for Exterior Ipê | Gift of: Mesmmers | mesmmers.com

Large Opening Glass Walls | Gift of: NanaWall® | The weather-tight, energy-efficient system exceeds industry standards for air infiltration, water penetration, structural and thermal performance and forced entry. | nanawall.com

Bamboo Flooring | SYNERGY Prefinished Strand Bamboo Flooring, Color: Java | Gift of: Teragren® commercial and All Tile, Inc. | alltile.com | Highly-renewable material that grows quickly, capable of growing more than 90 feet in just a year. | teragren.com

FIRST FLOOR

KITCHEN

Light Switches and Outlets | Gift of: Trufig | Eliminates wall clutter by offering consistency of color, design and finish. | danainnovations.com

Sonance Visual Performance Speakers | Gift of: Dana Innovations | Visual Performance Series speakers combine elegant, modern style with outstanding audio performance. | danainnovations.com

Elo Touch 19" Touch Panel | Gift of: Best Buy | This compact touch monitor is "designed for touch" with proven expertise and reliability built-in. | bestbuy.com

Steel Kitchen Cabinets | Scout find | Science cabinets rescued from the University of Chicago and refinished by Furniture Revival.

Blue Willow Tableware | Loaned by: Dinner Party | Chicago-based business that sells and rents vintage dinnerware. | dinnerpartyshop.com

Squak Mountain Stone Countertops | Gift of: Green Home Chicago Design Center | Color: Thunder | Made of mixed waste paper, recycled glass and low carbon cement. Over 50 percent post-consumer recycled content. | ghcdesigncenter.com

SousVide Supreme | Loaned by: SousVide Supreme | First water oven designed specifically to bring the gourmet sous vide cooking method into home kitchens. | sousvidesupreme.com

Kitchen Sink and Karbon Faucet | Gift of: Kohler | kohler.com.

Built-In Wall Oven and Cooktop | Gift of: BSH Home Appliances Corporation | Fast and efficient cooking technology. | bosch-home.com/us

Crestwood Kitchen Cabinets | Gift of: McNulty Design Group, Inc. | Made from FSC-certified wood, no-VOC wood sealant and formaldehyde-free particleboard substrates. Painted with Natura paint. | mcnultydesign.net

Integra® Built-In Refrigerator | Gift of: BSH Home Appliances Corporation | ENERGY STAR rated with an energy mode and vacation mode to conserve energy. | bosch-home.com/us

Tabletop Composter | Gift of: NatureMill | Recycles its weight in waste every 10 days, diverting more than two tons of waste from landfills over its life. | naturemill.com

Bodum Bistro Pour Over Coffee Machine | Loaned by: Bodum | Water is evenly distributed over the coffee grounds and heated in a thermal carafe, avoiding the tortures of a heating plate. | bodum.com

DINING ROOM

Table | Scout find and loaned by: Dan Baldino and the Baldino Family of Chicago and Fox Lake | Restored by: Furniture Revival | Original maintenance table from a South Side steel plant.

Delta Bar Stools | Crate and Barrel | Made from anodized aluminum, one of the more environmentally friendly metal finishing processes. | crateandbarrel.com

Lighting | Loaned by: Ted Harris, exclusively sold at Scout | Made from vintage globes, these lamps are a signature piece from the Ted Harris line. | tedharrislamps.com

Bicycle photography | Photography by: JB Spector and Framed by: Foursided Frame Gallery | Images of the Museum historic bicycle collection. | foursided.com

Bureau of Drawers and Compartments | Museum Collection | Used by a *Daguerreotype Photographer* ca. 1890.

LOUNGE

Shaggy Wool Rug | Scout find | Oscar Isberian rug made from reclaimed wool from vintage kilim rugs that have been unraveled and rewoven in the Turkish countryside. | isberian.com

Cabinets | Scout find | Salvaged from a Illinois law office and restored by Scout, Chicago.

Samsung 55" LED TV | Gift of: Best Buy | bestbuy.com

Easel | Scout find and loaned by: Interior Designer David Hopkins | Vintage easel repurposed to hold the television. | thoughtandtheorydesign.com

Coffee Table | Scout find | Long pine slat bench-style table found at a south Chicago house sale.

Couch | Scout find | Upholstered by: The Furniture Shop

Sofa Upholstery | Hemp | Gift of: Camira | Hemp is natural, rapidly renewable and biodegradable. | camirafabrics.com

Artwork | Scout find and drawn by: Michael McGuire | Cross-hatch pen and ink drawings on 100% rag paper. | mrmagooart.blogspot.com

Rubik's Slide™ | Gift of: Techno Source | Combines simplicity and fun of casual games with fast-paced, brain-busting cubing. | technosourceusa.com

LIVING ROOM

Corliss Chair | Loaned by: Gentner | Made of stainless steel metal, one of the most recyclable materials. | gentnerdesign.com

Chair Upholstery | Caress/Port, Brentano Green | Gift of: Brentano, Inc. | Environmentally friendly faux leather. | brentanofabrics.com

Artwork | Scout find and designed and created by Michelle Peterson-Albandoz | 15' custom wood mosaic made from reclaimed porch wood | Las Manos Gallery in Chicago and Long View Gallery in Washington DC | lasmanosgallery.com and longviewgallerydc.com

FLOR Area Rug | Premium wool rug made in the US using 100% wool, a sustainable, rapidly-renewable resource. | flor.com

Wooden Boxes | Scout Find | Inspired by heirlooms, Garth Borovicka created these from leftover materials from his company, Furniture Revival.

Lamps | Scout find and designed by: Ted Harris | Made from reclaimed iron pillars.

120-Drawer Console | Scout find and loaned by: Julian and Louise Kerbis | Salvaged from the Field Museum and restored by Furniture Revival.

Bones Table | Loaned by: Gentner | Made in Chicago from polished aluminum and glass, both recyclable materials. | gentnerdesign.com

Paul McCobb Shelving Unit | Scout find and loaned by: Gerald Williamson, friend of Scout.

Sonance Invisible Series Speakers | Gift of: Dana Innovations | Delivers on the long-held desire that speakers be heard but not seen. Invisible Series products can be used in standard sheetrock as well as textured and wallpaper surfaces. | danainnovations.com

HOME AUTOMATION

AMX Home Automation | Gift of: AMX | AMX Solutions automate technologies enabling homeowners and businesses to reduce energy consumption. | amx.com

Control Modules for AMX System | Gift of: Module Depot, Inc. | The parts behind your home. | moduledepot.com

GSLogic Home Automation Software for AMX Systems | Gift of: GSLogic | Controls and automates the home. | gslogic.net

Equipment Rack, Power Distribution and Accessories | Gift of: Middle Atlantic Products | Provides end-to-end solutions that maximize the operation and lifespan of many critical systems. | middleatlantic.com

F2 v5 2 Zone Music Server | Loaned by: ReQuest | Provides the ultimate audio video experience. | request.com

Wire, Cables and Interconnects for Connection of System Equipment | Gift of: Planet Waves/PWCIS | All connectors are reusable. | pwcis.com

Acer Aspire Revo | Gift of: Best Buy | Desktop computer with built-in wireless networking lets you connect to the Internet without wires. | bestbuy.com

HomeWorks Lighting Control System | Gift of: Lutron | System provides convenient control of a home's lighting and shades and can be integrated with security systems, heating and cooling systems and more. | lutron.com

Sony S580 Blu-ray Player | Gift of: Best Buy | Enjoy your favorite movies in high-definition with this Blu-ray Disc player. | bestbuy.com

Doherty Design Group | Provided oversight and brought together home automation partners to make the *Smart Home* smarter than ever. | dohertydesigngroup.com

Geek Squad | Provided home automation and A/V installation services. | geeksquad.com



Corlliss Chair
Loaned by: [Gentner](http://gentner.com) |
Made of stainless steel
metal, one of the most recyclable
materials. | gentnerdesign.com

SECOND FLOOR

HOME OFFICE

Pneumatic Hahl Master Clock, Automatic Clock Co. Chicago. | Museum Collection | Originally used in an industrial setting, this clock was the master timepiece, which set the time for the secondary clocks throughout the warehouse; ca. 1870.

Desk | Scout find | Designed by Jacob Tennant and created by Egg Toy Studios from hot rolled steel, a very recyclable material. | eggtoystudios.com

Artwork | Scout find | Wood mosaic created from old organ pipes salvaged from a church renovation. Conceived and created by Chicago artist Michelle Peteson-Albandoz. | lasmanosgallery.com

Cryoscope | Loaned by: Cryoscope | Aluminum cube fetches weather data from the internet and translates it to the cube physically, allowing the user to simply touch it to find out the weather. | cryosco.pe

Lytro Light Field Camera | Loaned by: Lytro | The first light field camera that allows consumers to instantly capture interactive, living pictures and then focus them after they are taken. | lytro.com

Eco Staple-Free Stapler | Gift of: Made By Humans | Eco-friendly stapler eliminates the need for waste-free staples. | madebyhumans.net

Broccoli | Gift of: DreamsUSA Inc. | Vibrant-colored sheets easily assemble into a business card holder, inspired by broccoli. | dreams6.com

S3 Arctic | Gift of: Wicked Lasers | The first laser to have multiple operating modes and up to 1000 mW of output. | wickedlasers.com

Photography, Winter Shorelines 2007/2012 | Scout find | Black-and-white photography by Jill Metcoff, printed from film in a traditional darkroom. | jillmetcoff.com

Recon-Zeal Transcend | Loaned by: Recon Instruments | World's first GPS-enabled goggles with head-mounted display. | reconinstruments.com

Herman Miller Leaf Lamp | Gift of: fuseproject | LED task light that offers the user the choice of warm mood light and cool work light. | fuseproject.com

BATHROOM 2

Shower and Floor Tiles | Squak Mountain Stone countertop slab, Color: Natural | Gift of: Tiger Mountain Innovations, Inc. | Handmade from recycled glass, paper and low-carbon cement. | tmi-online.com

Showertime | Allows user to decide amount of water to be used for each shower and then alerts user once limit has been reached. | efergy.com

Countertop | Gift of: Terra Green Ceramics | Made with 55 percent recycled glass content and qualifies for LEED certification points. | terragreenceramics.com

MASTER BATHROOM

The Fine Line | Oversaw the design and selection of eco-friendly materials to give our master bathroom a fresh new look. | finelinetile.com

Cybertecture Mirror | Loaned by: James Law Cyberecture (Mirror) Ltd. | With a touch, the mirror elegantly displays and monitors the time, temperature, local traffic and news, energy consumption and health data via a wireless connection. | cybertecturemirror.com

Kendall Charcoal Paint | Gift of: Benjamin Moore | Zero-VOC premium paint available in thousands of colors; exceeds LEED and Green Seal GS-11 standards. | benjaminmoore.com

Crush Recycled Glass Tile | Gift of: Fireclay Tile | Local vendor: The Fine Line | Recycled glass tile, fully created from pre-consumer waste glass, handmade in California. | fireclaytile.com, finelinetile.com

Brick Flooring | Gift of: Ecologie | Local vendor: The Fine Line | Tiles reclaimed from old factory demolitions. Characteristic colors of the Chicago region clay provide a rich pink-orange patina. | ecologie.com, finelinetile.com

Photo Collage | Scout find | Collage of Cabrini Green housing project created by Michael McGuire. | mrmagoart.blogspot.com

Shower Head | Purist Ecoefficient showerhead | Gift of: Kohler | 30 percent reduction in water consumption without sacrificing performance. | us.kohler.com

Cabinets | Scout find | These two vanities were originally part of one console. Furniture Revival repurposed the original piece to create two individual vanities, complete with an ebonized black lacquer finish.

Glass2 (Harmony) Countertops | Gift of: American Granite | Local vendor: The Fine Line | finelinetile.com | Fabrication and Installation: TTS Granite Inc. | 99 percent recycled glass, and contains no resin, glue or chemicals. Scratch and stain-resistant, bacteria-free, and tolerant of both cold and hot temperatures. | glass2.com, ttsgranite.com

Toilet | Persuade | Gift of: Kohler | 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 toilets. | us.kohler.com

Soladey J3X Ionic and Anti-Bacterial Toothbrush | Gift of: Euroviva Health Ltd. | Saves water and toothpaste and runs on free solar energy! | soladey.com



MASTER BEDROOM

Night Stands | Scout find | Vintage oak desk re-imagined into two night stands. Created and restored by Furniture Revival. | furniturerevivalchicago.com

Lamps | Scout find | Created by: Ted Harris from old stairway exit signs | tedharrislamps.com

Kendall Gray Paint | Gift of: Benjamin Moore | Zero-VOC premium paint available in thousands of colors and exceeds LEED and Green Seal GS-11 standards. | benjaminmoore.com

Drawings | Michael McGuire | Collage of City of Chicago housing projects and series of four abstract buildings. | mrmagooart.blogspot.com

LightSleeper | Gift of: Quincom Limited | Drug-free, non-invasive sleeping aid that project a controlled light on the ceiling above your bed. | lightsleeper.co.uk

Wallpaper | Gift of: Seabrook | Made from natural paper and grasses. | seabrookwallpaper.com

Ping Lamp | Loaned by: Studio Sophisti | Two lamps are connected with each other via the internet. One user will see his/her lamp glow when the other switches theirs on and vice versa. | studiosophisti.nl

Mattress and Cover | Gift of: Bower Natural Bedding | Natural rubber latex and organic cover. | bowernaturalbedding.net

Samsung 46" LED TV | Gift of: Best Buy | bestbuy.com

Goggle Umbrella | Gift of: 25TOGO DESIGN | Incorporates a viewing panel so you can stay dry and still see. | 25togo.com

FAMILY STUDY

d°light Bubbles | Gift of: Diana Lin Designs | Intriguing LED light you won't throw away. | dianalindesigns.com

Artwork by Michael Nicholson | Scout find | Repurposed bicycle tire inner tubes, hand stretched into collectible works of art.

Photographs by JB Spector | Museum Collection | Museum's typewriter collection including the Chicago Typewriter Company, 1895.

Lomokino Super 35 | Loaned by: Lomography | Movie camera that shoots short, creative movies on 35mm film. | lomography.com

Study Table | Scout find | Classic round tulip table with stripped metal base and added zinc top.

Wolf Gray Paint | Gift of: Benjamin Moore | Zero-VOC premium paint available in thousands of colors and exceeds LEED and Green Seal GS-11 standards. | benjaminmoore.com

Carpet | Gift of FLOR, Inc. | Subtle Ikat design made in the US from 100 percent recycled nylon fibers. | FLOR.com

Chalkboards | Scout find | Salvaged from a North Side Chicago high school.

Oak Bookcase | Scout find | Salvaged from a South Side Chicago grammar school.

OAT Red White/Beige Sneakers | Gift of: OAT Shoes | Constructed from hemp canvas and bioplastic. | oatshoes.com

Bookends | Scout find | Book ends of the Earth, by Garth Borovicka, use the layers and rings of the wood to represent the sedimentary layers and passage of time.

INNOVATIONS... THEN AND NOW

This year, the *Smart Home* showcases amazing historical discoveries and gadgets from the Museum's collection, paired with their contemporary counterparts selected by Gizmodo. Compare and contrast old vs. new and see how early inventions made way for some of today's most advanced technologies.

THEN - Full Furniture Television Set, 1925
NOW - **Boxee Box by D-Link** | Gift of: Boxee, Inc. | Connect to your TV and watch any show from the internet or movies from subscription services. | boxee.tv

THEN - "Call Me" Mantel Clock, ca. 1920
NOW - **Klock-o1** | Gift of: Areaware | Designed by Singgih Kartono and made from sustainably harvested wood. | areaware.com

THEN - Handheld Plastic A.M. Radio, ca. 1970
NOW - **XMp3i™ Portable Radio** | Loaned by: SiriusXM Radio | Listen at home or in your car with SiriusXM's most versatile radio. | siriusxm.com

THEN - Corona Typewriter, ca 1900
NOW - **Apple Wireless Keyboard** | Gift of: Best Buy | Features Bluetooth technology for wireless use up to 30 feet away from your Mac. | bestbuy.com
TiVo Slide Remote | Gift of: TiVo Inc. | Puts the full power of TiVo in the palm of your hand. | tivo.com

THEN - Sony Walkman ca. 1988
NOW - **MIXA – Digital Mix Tape** | Gift of: Beep Industries Ltd. | MIXA is a USB tape and can be refilled and reused over and over. | beephq.com

THEN - Polaroid Camera with Leather Case, ca. 1970
NOW - **Eye-Fi Mobile X2** | Gift of: Eye-Fi | Memory card wirelessly uploads media to your computer, smartphone, tablet or favorite online site. | eye.fi



THEN - Brownie Camera, ca. 1920
NOW - **Canon Rebel T3i with 18-55mm Lens** | Gift of: Best Buy | EOS Feature Guide with enhanced Quick Settings Screen for detailed descriptions of settings to make using this camera super easy. | bestbuy.com

THEN - Phonograph Recording in its Original Container, ca. 1895
NOW - **Western Digital 2TB Network Drive** | Gift of: Best Buy | Share media with everyone on a wired or wireless network with this network drive; compatible with PC and Mac for wide-ranging use. | bestbuy.com

THEN - Atari Gaming Station, ca. 1981
NOW - **Nintendo 3DS** | Gift of: Best Buy | Vivid colors, brilliant action and 3D depth await you on the other side of the 3DS' top screen. | bestbuy.com

BOYS' ROOM

Lollisoft Bed | Gift of: Resource Furniture | Sustainable living by efficiently using space. | resourcefurniture.com

Hot Wheels Video Racer Vehicle | Loaned by: Mattel | Action video camera inside a die-cast vehicle that puts you in the driver's seat of your own Hot Wheels® vehicle. | mattel.com

Numbers LED Clock | Gift of: Areaware | LED clock requires minimal power. | areaware.com

Celestron SkyProdigy 130 | Loaned by: Celestron | Automatic alignment smart telescope provides a read out giving quick facts about the objects you are looking at in the sky. | celestron.com

Huey the Color Copying Chameleon Lamp | Gift of: ThinkGeek | Matches the color of the surface he sits on using two LEDs and a sophisticated optical sensor to determine color. | thinkgeek.com

Getting Started with Arduino | Gift of: Make Magazine/Maker Shed | Inspires, informs and enables makers and artists interested in physical computing. | MakerShed.com

Starship Earth II | Gift of: Spherical Concepts | 3-D star atlas helps you locate and identify celestial objects from anywhere on Earth, at any hour, any day. | sphericalconcepts.com

Sega Toys Homestar Home Planetarium | Loaned by: Dynamism | Create a beautiful star-lit night sky in the comfort of your own home. | dynamism.com

Bandai X Flyer | Loaned by: Dynamism | Fusion of two classic toys, the hacky-sack and frisbee, brought to the modern age. Floats and sinks in the air, responding to body movement. | dynamism.com

TRON: Legacy Zero Gravity Light Cycle | Gift of: Disney Consumer Products | Can be driven on walls or ceilings as fans act out their favorite movie moments from *TRON: Legacy*. | disney.go.com/tron

Sphero | Loaned by: Sphero | First robotic ball controlled by a smartphone using Bluetooth technology. | gosphero.com

Parrot AR. Drone | Loaned by: Parrot | First quadricopter controlled by an iPod touch®, iPhone®, or iPad™ combines real and virtual worlds to offer an unparalleled flight experience. | parrot.com

Casio Green Slim XGA Projector | Gift of: Best Buy | Features a Hybrid Light Source that combines laser and LED technology for brightness that can last up to 20,000 hours. | bestbuy.com

Energizer®Energi To Go® SP1001 Portable Solar Charger | Gift of: XPAL Power | Rechargeable, solar-powered portable charger keeps your devices working. | energizerpowerpacks.com

Robotic Chick | Loaned by: Dynamism | Animatronic baby chick with realistic chirping and flapping wings. | dynamism.com

GARAGE

Solar Hybrid Automower | Gift of: Automower | Automatic lawn maintenance powered by sunlight. | automower.com

Torch | Gift of: Wicked Lasers | The worlds most powerful flashlight, with 4100 lumens of raw power. | wickedlasers.com

Bakfiets Cargobike | Loaned by: Dutch Bike Co. Chicago | Marine plywood cargo box on this bike means you don't need a car. | dutchbikeco.com

Folbot Citibot Kayak | Gift of: Citibot | 10-foot kayak that folds into a backpack and weighs only 24lbs. Provides an easy way to enjoy eco-friendly recreation. | folbot.com

IF Mode Folding Bicycle | Loaned by: Pacific Cycles | One less car when function meets style. | pacific-cycles.com

Garage Doors | Gift of: Clopay Building Products | Durable rust-proof aluminum frame with insulated tempered glass allowing natural light to filter through while maintaining relative privacy. | clopay.com

Gardening Tools and Products | Gift of: Fiskars | These tools are created for maximum efficiency and ease of use. | fiskars.com

Garage Door Openers | Gift of: Chamberlain | Mounts easily on the wall, freeing up ceiling space and operates even when the power goes out. Identified for LEED by the U.S. Green Building Council. | liftmaster.com

ULTRAponics GroTube | Gift of: Ultraponics | Hydroponics allow for fast growth in small spaces with minimal water, allowing for gardeners to start seedlings indoors during cool weather. | ultraponics.net

Q Drum | Gift of: Q Drum | Designed to roll 50 liters of water across all terrain types when a water source is not near. | qdrum.co.za



LANDSCAPING AND VEGETABLE GARDEN



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

- Native plants have extensive root systems, are well-adapted to our climate, 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 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 vegetables and herbs are available during three seasons. Plants are designed in ground patterns.
- Organic mulch minimizes weed invasion, converts moisture, reduces soil temperature fluctuations, protects root systems and keeps vegetables clean.
- Yard and garden waste is composted and added to the garden as a rich soil conditioner.
- Space is maximized via trellises, vertical walls and a planted trough table, staking tomatoes, container gardening, and mixing fast-maturing crops with slower growers.
- Raised beds demonstrate options for bringing in healthy soil when urban land is contaminated. They also improve drainage, maximize space by eliminating walkways between rows, avoid compaction and aid gardeners with physical disabilities.
- Two hives house more than 60,000 bees at the height of the summer. Bees help pollinate the plants and provide honey, a natural sweetener.

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 Extension Master Gardeners plant and maintain these gardens and will be available to answer your gardening questions on select Tuesdays, Thursdays and Saturdays. For more information visit us on the web at web.extension.uiuc.edu/cook/urbanhort.html. Greg Pierceall consulting educator, garden design

Jacobs/Ryan Associates | Overall Landscape Design | With strong Midwestern sensibilities, Jacobs/Ryan has provided thoughtful landscape architectural consulting services for more than three decades. | jacobsryan.com

Tower Garden® Growing System | Gift of: JuicePlus+ | Simplifies traditional gardening using a unique vertical garden system that makes it easy to grow fresh fruits and vegetables. | buyatowergarden.com

BIOTILE® Vertical Garden System | Gift of: Sage Botanic Media/Biotile | 100 percent recyclable, water-efficient, energy-saving, habitat-providing, carbon-absorbing vertical garden system that can be used indoors or outdoors in warm and cold climates. | sagebotanicmedia.com

Openlands Native Habitats Program | A Clean Air Counts partner. Bioswale and Rain Garden. Openlands is dedicated to preserving and enhancing public open space in northeastern Illinois. The organization's Community Greening program supports community and school-based greening within Chicago. | openlands.org

Green Grid | Gift of: Weston Solutions, Inc. | Modular green roof system preplanted in 100 percent recycled modules. Saves energy and reduces air and water pollution. | greengridroofs.com

Porous Paver System | Gift of: Unilock | Installation Gift of: Claus Brothers, Inc. | Prevents rain water run-off by allowing water to permeate between the pavers. | unilock.com

Living Wall | Gift of: ELT Easy Green, Inc. | Unique modular design allows efficient water management and diverse planting options. Growing vertically helps maximize green space in urban areas. | Plants gift of: JFNew | elteasygreen.com, jfnew.com

Vegetable, Herb and Bedding Plants | Gift of: Burpee Home Gardens | Growing your own produce reduces your carbon footprint! | burpeehomegardens.com

All-America Selections | Gift of: Flower, herb and vegetable seeds | Mission: To promote new garden seed varieties with superior performance. | all-americanselections.org

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

Earthboxes | Gift of: Earthbox.com | Maximizes space and uses 60 percent less water. | earthbox.com

Cistern | Gift of: RainHarvest Systems and Rotronics-Colorado | rotronics.com | Rainwater collection systems conserve water and reduce storm water erosion. | RainHarvest.com

Landscape Trough Table | Gift of: Cole and Sons | Designed by Greg Pierceall and made of concrete and repurposed timbers and recycled metal.

Fiskars Tuscany Rain Barrel, DiverterPro and Tools | Gift of: Fiskars | Designed to easily intergrate into the home's downspouts and collect water for landscaping. | fiskars.com



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. Indoor and outdoor rooms open into each other to create one big, connected living space. The roof decks maximize all of the outdoor space the home has to offer. Sustainable design isn't just about minimizing our impact on the environment, it's also about enjoying it.

Alfresco Grey Rectangular Table and Dining Chairs with Graphite Sunbrella® Cushions | Gift of: Crate and Barrel | Looks like real wood; waterproof and UV fade and mildew resistant to ensure a long lifespan. | crateandbarrel.com

Adirondack Chairs | loll designs | Made with 100% recycled high density polyethylene. | loll designs.com

Decking | Gift of: Trex | Made of reclaimed plastic and scrap wood, which would otherwise be in a landfill. Maximizes outdoor spaces. | trex.com

Roof Deck Supports and Ipê Wood Tiles | Gift of: Bison Desk Supports | 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. | BisonDeckSupports.com

Outdoor Fireplace | Gift of: The Tile Gallery | Runs on environmentally friendly denatured alcohol and is fully portable. | tilegallerychicago.com

Wooden Planters | Scout find | Rustic white-washed planters rescued from a farm in Northern Indiana.

ECO-TIPS

Learn ways to leave a smaller eco-footprint inside and outside your home. Visit msichicago.org/smart-home for more!

Smart Design

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, river, and 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.

Material Efficiency

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

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

Bring your own cup to your favorite coffee shop, or if you are eating in, ask for a "for-here" mug.

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 grow!

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

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

Energy Efficiency

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

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.

Water Efficiency

Turn off the water when you brush your teeth to save around four gallons each person, each time.

Fix that leaky toilet or sink. You may be losing as much as 200 gallons a day.

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.

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.

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 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 illinoisrecycles.org for more information.

Take public transportation!

GLOSSARY

Biodegradable A product or material made from plant or animal material that, after usage, is broken down quickly by other living organisms.

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.

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.

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.

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 eere.energy.gov for more information and availability.

Off-gassing 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, 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.

Renewable Energy Energy from sources that regenerate or re-occur such as wind or sunlight.

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

VOCs Volatile organic compounds found in paints and carpet glue, are the leading cause of indoor air pollution.





SPONSORS

Allstate

The Allstate Corporation (NYSE: ALL) is the nation's largest publicly held personal lines insurer known for its "You're In Good Hands With Allstate" slogan. Now celebrating its 80th anniversary as an insurer, Allstate is reinventing protection and retirement to help nearly 16 million households insure what they have today and better prepare for tomorrow. Consumers access Allstate insurance products (auto, home, life and retirement) and services through Allstate agencies, independent agencies, and Allstate exclusive financial representatives in the U.S. and Canada, as well as via www.allstate.com and 1-800 Allstate*.

ComEd

ComEd is uniquely positioned to bring value to its customers and the communities it serves, particularly when it comes to saving energy and helping the environment. ComEd has been committed to environmental stewardship, being a valuable energy information provider.

The utility's energy efficiency and education programs are part of Exelon 2020, the comprehensive corporate strategy of ComEd's parent company, Exelon, to reduce, offset or displace more than 15 million metric tons of greenhouse gas emissions per year by 2020. In June 2008, ComEd launched its Smart Ideas portfolio of energy efficiency offerings, expected to save ComEd customers more than \$155 million throughout the duration of the programs. Smart Ideas includes discounted CFL bulbs, weatherization initiatives, energy efficiency curriculum for teachers, environmentally responsible fridge and freezer recycling, and many more ways to help our customers reduce costs, save energy and help the environment.

ComEd also continues to take steps to reduce its own carbon footprint, whether by operating the seventh largest fleet of green vehicles in the nation, restoring Illinois' prairies, or reducing the environmental impact of ComEd facilities.

PARTNERS

Michelle Kaufmann is a nationally recognized leading architect specializing in sustainable, innovative, and smart buildings. Working under the belief that thoughtful, sustainable homes should be accessible to more people, Kaufmann works with off-site construction technology and creative design processes. The goal in all of her work is to make it easier for people to build beautifully green and live a more sustainable lifestyle. michellekaufmann.com

Gizmodo.com is the authority on the technologies that change the way we live, work, love, play, think and feel. From the humble tools in a mechanic's belt, to the cellphones that we check Facebook on, to the space shuttles and submarines we use to explore the unknown, Gizmodo's core belief is that the mastery of technology is at the core of the humankind's evolution—for better or worse. Since its launch in 2002 the site has amassed over

6 million readers through its combination of reporting, opinion and explanations of how tech changes everything around us.

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:



Allstate | CHICAGO'S OWN
GOOD HANDS™

ComEd®

Partners:



GIZMODO

michelle kaufmann
studio



UNIVERSITY OF ILLINOIS
EXTENSION
Helping You Put Knowledge to Work



**SMART
HOME**
GREEN + WIRED



museum of
science+industry
chicago

57th and Lake Shore Drive, Chicago | msichicago.org