THE Green House

Using environmentally friendly products isn't just about hugging trees. It can save you money, improve your health, and make your home look stunning.

By Suzy Frisch

Saving money by installing energy-efficient appliances. Slashing energy bills by selecting solidly built windows. Breathing cleaner air by using paints and stains that are nontoxic. Picking cork or bamboo floors that look beautiful and keep a forest thriving.

These are a few of the many ways to go "green" in your home—using energy efficiently and choosing materials produced by means that don't harm the environment—whether you are constructing a new house, remodeling, or building an addition. Building an environmentally friendly house can mean saving money, creating healthier surroundings, and using fewer of the world's resources.

From the macro level of deciding where to build, to structural materials, finishes like flooring and countertops, and the nitty-gritty of caulks, adhesives, and paints, it's possible to green up almost any aspect of a house. And the many elegant but environmentally friendly products available mean that high-end homeowners don't have to sacrifice beauty and style by using green materials.

The up-front costs of green products may be bit higher, but they can pay off over time. "Wouldn't you rather spend 10 percent more on something and have it last 10 times longer? I would," says Richard Lundin, an architect and partner at 3 Studios, Inc., in Minneapolis. Building green "is for the sake of our economy, the health of our children, and prolonging the lifecycle of the things we create."

From the Top

A few critical decisions early in the design process can go a long way toward creating a home that is long lasting and environmentally sound. The first step is to situate a house on its lot to take full advantage of the elements, such as sunlight and trees.

Existing trees can provide shade from the summer sun, while the judicious placement of the house and its windows makes the best use of daylight. It's also important to site a house so it doesn't run off water into a wetland, notes Rosemary McMonigal, an architect and principal of McMonigal Architects LLC in Minneapolis, who has been using green practices in her work for more than 20 years. She often incorporates rain gardens into home landscape designs, which collect runoff to replenish ground water and feed water-loving plants.

PHOTOGRAPH BY ANDREA RUGG

McMonigal Architects designed a Minneapolis home for a client with chemical sensitivities. Most of the building materials had to be tested for the client's reaction.

For Eric Odor, an architect and partner at SALA Architects in Minneapolis, green building is all about constructing a high-quality home with no wasted space. That way, residents aren't paying to heat, cool, and light a house where a number of rooms rarely get used.

"One of the most sustainable things you can do is to build a very well-constructed house that can stand the test of time," he says. "Don't build something inexpensive that can leak and fall apart. We're focused on doing very well-insulated houses with good windows."

In fact, windows are an excellent place to invest in energy efficiency. Look for wood windows with double- or triple-paned glass; even better are windows with a low-emittance (low-e) coating, says Michael Anschel, principal of Otogawa-Anschel Design Build in Minneapolis. This microscopically thin coating of metal oxide lets the sun's heat and light through the window but slows heat loss from the room.

Lately, Anschel has gravitated toward the high-quality windows from Iowa-based Pella Corporation and Marvin Windows and Doors of Warroad, because they are made close to the Twin Cities. Using locally made materials reduces shipping distance, saving on fuel consumption and vehicle emissions. Andersen Corporation is another nearby manufacturer.

Wood and Beyond

Green designers acknowledge that wood is an essential element of any home, but your choice of wood makes a difference. Timber certified by a credible organization, such as the Forest Stewardship Council, ensures that the wood was harvested using sustainable methods, rather than clear cutting, which can cause permanent damage to forests.

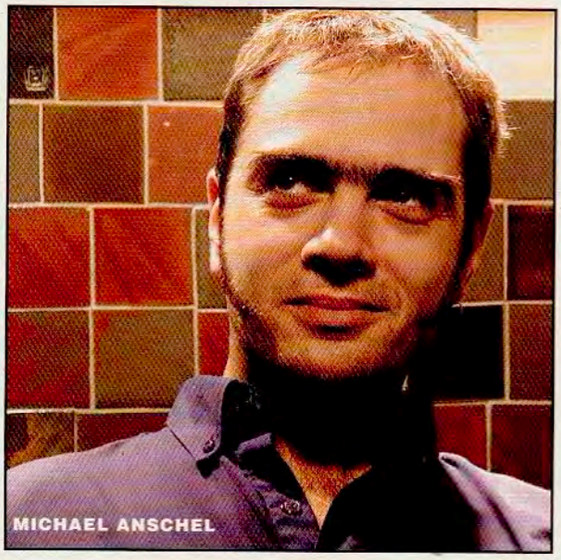
McMonigal likes to build with engineered lumber (made from wood chips or strands and adhesive), which is composed of easily grown smaller trees instead of old-growth trees. Engineered wood can be used instead of solid wood for beams, joists, sheathing, or flooring, and it's readily available. Anschel also prefers engineered flooring over traditional hardwood: "It's much more stable than regular wood. It won't twist and warp."

Using reclaimed wood is another possibility, such as that found at The Reuse Center in Minneapolis, which sells materials from "deconstructed" homes. Or it can be the remilled wood that Duluth Timber reclaims from industrial structures. "It's beautiful wood. It's really gorgeous," says McMonigal of Duluth Timber's products. "It certainly costs more than new wood off the shelf, but it goes back to the idea of sustainability—it's one less tree that needed to be cut down."

Picking flooring material other than wood or synthetic products such as vinyl is another way to get beauty without environmental damage. Cork and bamboo both come from renewable resources. Cork is the bark of the cork oak tree and is harvested every nine years without damaging the tree; bamboo is an easily-grown plant in the grass family. Odor says bamboo flooring looks like hardwood but with tighter grains, and it can be stained to look like walnut or maple. "It's incredibly durable—harder then maple," he says. McMonigal attests to cork's remarkable resilience. She has remodeled homes built in the 1940s that have original cork flooring in good condition.

People may associate linoleum

with an ugly floor in their parents' kitchen, but natural linoleum is actually quite beautiful, Lundin says. It's made from linseed oil, rosin, wood flour, and jute. "It's extremely durable and the color selections have become fun and interesting again," he says. "You can do it in tile so it doesn't look like big sheet flooring."


MICHAEL ANSCHEL

Selecting "green" carpeting is another place to make a difference for your health and for the environment. First, consider using natural materials such as wool instead of synthetic fibers such as acrylic and nylon. Then there are carpet tiles. They are more efficient to install than rolls of carpeting—there is much less waste. And if there are stains or spills, you can just replace the trouble spot with a new tile.

Harold Teasdale used green products in developing Jackson Meadow in Marine on St. Croix, a sustainably designed housing community. He's sold on using carpet tiles, because adhesive isn't needed for installation; the tiles just lock into place. The carpet, which comes with a thick pad on each tile, is also better quality than the type that comes on broadloom rolls. In addition, many of the carpet tile companies allow customers to return old tiles to be recycled rather than sending them to the landfill.

People interested in going green should consider stone or composite materials for countertops. Trendy granite counters are not only durable and beautiful, but all natural. Anschel suggests granite, quartz, or silestone, rather than man-made products such as Corian (made from petroleum) and Formica (made of plastic).

There are also new products available made from recycled materials. One is shetkaStone, which was created by Stanley Shetka, a Gustavus Adolphus professor of art and design. It is made from recycled paper, cloth, and plant materials such as alfalfa. Using a fiber-engineering process, the paper or fibers are formed into countertops, tables, chairs, and moldings. Available in a variety of colors, shetkaStone is as hard as stone and very durable, Shetka says.

Those looking for improved home air quality should use nontoxic paints, adhesives, caulks, and sealants. They should also consider products that have low levels of volatile organic compounds, which emit noxious fumes. Water-based caulks and sealants are good options.

The products mentioned here only scratch the surface of what's available. But it should be clear that you don't have to sacrifice quality and style to be a friend to the environment. ■

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