Great Smoky Mountains Institute at TREMONT
connecting people and nature...

Creating Buildings that Teach

Sustainable Design Elements

Thanks to the Alcoa Foundation's generosity, renovations to the Tremont Science Lab were made in June 2008. Tremont made a conscious effort to include green items throughout this process with the goal of creating, demonstrating and teaching sustainability to the thousands we serve each year. Below are details on how Tremont has met that goal in creating buildings that teach, helping us to fulfill our mission of connecting people and nature.

Glidden Paints - NO-VOCs

Volatile organic compounds (VOCs) are one of the ingredients of ground-level ozone (O_3) pollution. Breathing air with high amounts of ozone causes respiratory distress, especially for those with asthma. Unfortunately many common products, from gasoline to house paint, contain VOCs. By using Glidden Paints, Tremont is helping the park combat ozone pollution.

Did you know? Trees also generate VOCs during respiration. That is why we have higher ground-level ozone days in the summer when trees are photosynthesizing.

Recycled Sheetrock

The walls in this room are composed of recycled sheetrock. Both the inner core (gypsum) and liner paper are made of 100% recycled materials, saving both money and resources.

Did you know? Over 7 million tons of sheetrock are thrown in landfills each year in the US and Canada. Nearly all of this waste could be recycled into new sheetrock.

High Efficiency Lighting

The high efficiency T8 light fixtures in this room are not only brighter, but also more energy efficient than our old fluorescent bulbs. On average, this will save us $12 per fixture per year in electricity costs.

Did you know? Most of the energy generated for electricity in Tennessee comes from burning coal. In Tennessee, coal burning power plants in 2006 emitted 270,000 tons of sulfur dioxide, 100,000 tons of nitrogen oxides, and 61,380,000 tons of carbon dioxide.

Armstrong - Recycled Ceiling Tiles

The new ceiling tiles consist of 45% recycled wood fiber. The Armstrong Ceiling Recycling Program has saved over 12 million gallons of water, 24 million pounds of landfill waste, and 34 million kilowatt hours of electricity.

Did you know? At the end of their lifespan, these ceiling tiles will be recycled once again, saving money and resources.

Ultratouch - Recycled Denim Insulation

The insulation we chose is made of 85% recycled cotton fiber and is 100% recyclable at the end of its lifespan. This product is VOC and formaldehyde-free, unlike traditional insulation.

Did you know? Our contractor loved working with denim insulation because it doesn't irritate the skin like traditional insulation materials.

Argon-filled Windows

The original windows in this room were single-paned windows, so they were very poor insulators. The new argon-filled windows are better at resisting heat flow and better at insulating, giving them a lower U-factor, which is a measurement of the rate of heat loss.

Did you know? Windows filled with gas such as argon or krypton minimizes convection currents within the glass panes, while also blocking ultraviolet sunrays.

Recycled Rubber Floor

The floors are made of 100% recycled tire rubber. The surface is durable, waterproof, and naturally non-slip. Unlike vinyl, recycled rubber floors have low VOC emissions.

Did you know? In 2003, 27 million tires ended up in landfills.