Green Monthly ~ September 09

Growing Green Report

A Monthly review of Lehigh Phoenix Go Green Initiative

Optimism + Initiative = Growth




Happy "Green" Halloween!

Although many people think of orange and black as the predominant colors of Halloween, people are bringing "green" into Halloween. Halloween is an awesome opportunity to practice earth friendly choices and to demonstrate to children the ease of implementing "green" ways during the season's frightful festivities. Here are some suggestions for reducing, re-using, and recycling items during the Halloween season. Approach Halloween with the thought of reducing some of the extraneous waste that results from the general practices of the holiday. From decorating your home to creating unforgettable costumes, think about the opportunities to be "green" in your activities. When it comes to decorating for the season, try making your own spooky decorations from items in your recycling bin. The internet can provide a plethora of craft ideas using items in the home that can be recycled and reused once the holiday has passed. When decorating outside, consider solar-powered decorations which don't waste energy and run up your energy bill. For example, a string of solar powered Halloween LED lights will operate for up to 8 hours from one day of charging in the sun and will provide a ghoulish glow to your yard. Most Retail stores offer a variety of solar-powered decorations to help make your yard a scary and spooky lot.

When it comes to filling the sacks of the goblins and princesses that visit your porch, think beyond candy! Consider handing out toys or stationary items made from recycled products. Most of these items are sold in bulk with minimal packaging waste. Pencils and stickers have been a fun alternative to candy over the years and can now be found made of recycled products like denim, recycled currency, and newspaper. Another non-candy option is handing out cards with fun facts or riddles on them. For example, a pack of cards with Brain Teasers and Riddles can be broken up and handed out individually. If you want to include a sweet treat for your trick-or-treaters, look for Halloween candy that comes in recycled or biodegradable packaging.

Have you ever noticed that children seem to grow out of or tear their Halloween costume before Halloween night even arrives? Instead of purchasing a new costume every year, consider hosting a costume exchange with your neighbors, family members, and co-workers. Not only will you save money, but you will also show your kids the value of reusing items, breaking down the "one-use mentality" prevalent in our society today. Children can demonstrate an incredible creativity when it comes to the design and construction of their theme inspired costumes. Cardboard boxes become robots or dice while old bed sheets are shredded and transformed into the wrappings for a mummy. As a family, hold a contest to see who can come up with the best costume using only items found around the house and that can be recycled after Halloween is over. You'll be amazed at how those cracker boxes magically change before your eyes into the sleeve pieces of a robot or how the paper towel rolls become bug antennae. Add the "green" element to your Halloween experience this year and enjoy the "treat" of taking care of the planet in the process!

Jack of all Uses:

Ways to Get the Most Out of Your Jack-o-Lantern this Season!

Use the whole pumpkin! Seeds can be baked with a little bit of salt for a tasty and healthy snack *(the shells are edible and are a good source of fiber)* and the freshly cutout pieces can be pureed for recipes that call for fresh pumpkin, avoiding canned pumpkin. After the decorated jack-o-lantern has fulfilled its Halloween night's duty, toss it into the compost pile where it breaks down and adds rich nutrients to your spring planting fertilizer. Pumpkins are an excellent food source for wildlife. Place your crushed pumpkins in nearby wooded areas or fields where wildlife can feed freely. Who would want a used jack-o-lantern after Halloween? A local zoo or Animal Rescue Center just might! Fresh pumpkin is a healthy seasonal treat for animals like elephants, red pandas and mongooses.

Light this Way, Save this Way:

Since the invention of the incandescent light bulb in 1879, people everywhere have been fascinated with the use of lighting and the mechanisms through which it is distributed. As energy efficiency becomes the fiscally and environmentally right thing to do, innovators have turned towards LED lighting as a replacement for traditional lighting options. LED lighting has been around since the 1960s, but is just now beginning

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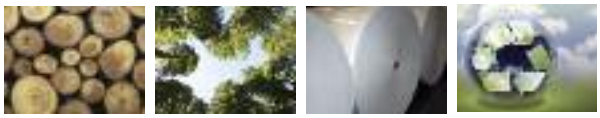

to appear in the residential market for space lighting. LED, Light Emitting Diode, is a semiconductor device which converts electricity into light. They are illuminated solely by the movement of electrons in a semiconductor material. This semiconductor material is referred to as Solid State Lighting. LEDs last much longer than incandescent bulbs because they do not have a filament that will burn out, and the LEDs are always cool to the touch. With no filaments to break or burn out, LEDs will withstand electrical fluctuations, shock, vibration and day to day wear, they will also operate in extreme environments from -40°C to 185°C.

LED Lighting is a viable alternative for the energy conscious consumer, with minimal heat production and efficiencies that far exceed anything in the market today. A quality LED product will pay for itself with increased efficiency and a long lifespan *(+50,000 hours)*, ultimately reducing energy demands and variable overhead costs associated with frequent bulb replacement. When LEDs eventually do expire, they will not come to an abrupt end like incandescent and compact fluorescents. But will simply start fading slowly and eventually burnout completely. One factor that many people do not consider when purchasing a light bulb is wasted energy in the form of light. Excess energy refers to the light output that is unnecessary to properly illuminate a given space. Where there is excess light there is usually excess heat as well. These problems are common with most forms of traditional incandescent, halogen and compact fluorescents. LEDs have solved this problem and are a much more efficient lighting option because they are directional. LED bulbs and lamps can be manufactured in 30°, 60° & 90° angles of light distribution. This control of light distribution gives flexibility to the lighting environment and creates a more useful and efficient form of illumination. When it comes to the environment, LEDs lead the way in reducing harmful CO2 emissions into the atmosphere. On average, a single kilowatt-hour of electricity will generate 1.34 pounds of CO2 emissions. Assuming the average light bulb is on for 10 hours a day, a single 40-watt incandescent bulb will generate 196 pounds of CO2 every year. The 13-watt LED equivalent will only be responsible for 63 pounds of CO2 over the same time span. A building's carbon footprint from lighting can be reduced by 68% by exchanging all incandescent bulbs for new LEDs. LEDs are also non-toxic unlike the more popular energy efficient bulb option: the compact florescent a.k.a. CFL which contains traces of harmful mercury. While the amount of mercury in a CFL is considerably small, the best option is to utilize options that have little to no effect on the environment. LEDs are rapidly becoming the most efficient form of lighting in the 21st century and offer an environmentally friendly and fiscally responsible alternative to the average consumer.

LED's vs. Traditional Lighting Options

A Brief Comparison

Advantages:

- Low energy consumption – retrofit bulbs range from 0.83 to 7.3 Watts
- Long service life – LED bulbs can last up to 50,000 hours
- Durable – LED bulbs are resistant to thermal and vibrational shocks and turn on instantly from -40C° to 185C°, making them ideal for applications subject to frequent on-off cycling, such as garages and basements
- Directional distribution of light – good for interior task lighting
- No infrared or ultraviolet radiation – excellent for outdoor use because UV light attracts bugs
- Safety and environmentally conscious – LEDs contain no mercury and remain cool to the touch
- Fully dimmable – LEDs do not change their color tint when dimmed unlike in candescent lamps that turn yellow
- No frequency interference – no ballast to interfere with radio and television signals
- Range of color – LEDs can be manufactured to produce all colors of the spectrum without filters, they can also produce white light in a variety of color temperatures

Disadvantages:

- LEDs are currently more expensive than more conventional lighting technologies and may be hard to locate
- LED are very heat sensitive. Excessive heat or inappropriate applications dramatically reduce both light output and lifespan
- LEDs typically cast light in one direction at a narrow angle compared to incandescent or fluorescent lamps so lenses or reflectors are needed in fixtures to broaden the beam *(if desired)*