

Merry Christmas and a Happy New Year - Ezine no 6



Christmas Energy Saving Tips



Dublin's Energy efficient Christmas tree



SEI at 2009 Young Scientists Exhibition



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Christmas Energy Saving Tips

Christmas lights, dark evenings, cold nights and shopping. These are just some of the reasons we use so much energy around this time of year. There are lots of ways to minimize your energy use and enjoy a 'greener' Christmas.

Lighting - the dark evenings mean that we are relying on lighting at this time of year. As always make sure lights are turned off in empty rooms.



We need to keep warm and cosy at this time of the year, but we can also avoid wasting heat by using a timer for the heating, keeping curtains drawn and doors shut and by turning off the heat once we are warm enough.

[Click here for more information on energy saving Christmas lighting.](#)

Tips on a sustainable Christmas from www.change.ie can be found [here](#)

Dublin City's Energy Efficient Christmas Tree

Dublin City's Christmas Tree on O'Connell street has been designed to be energy efficient. It is the tallest Christmas tree ever erected in Ireland. The tree is covered in 100, 000 LED lights and will use the equivalent energy as required to boil 10 kettles (or 10 kilowatts of energy)

LED's or Light emitting diodes make great Christmas lights



LED's are more energy efficient than traditional incandescent light bulbs



they last longer



they come in many colours

- + they don't heat up and so are safe
- + they are more durable



Image of typical LED

SEI at Young Scientists Exhibition 2009

How many young scientists does it take to light a light bulb?

Come to SEI's stand in the Eco Zone at this year's Young Scientist Exhibition and challenge yourself at our Human Power Station. Use your own pedal power to turn on a radio, light a light bulb and see if you can make our fan heater work.

SEI's stand will also have a display of last year's winning photographs from our Life Through A Lens Photography competition. SEI science facilitators will be on hand to answer your questions.

The Young Scientist Exhibition takes place at the RDS, Dublin from January 6th to 10th more details on the web [here](#) .



Primary Schools

Spot the difference- Insulation

We all know that insulating our homes can save energy by keeping heat inside. You might like to use the image below to have a discussion about insulation with your class.

Q: Only one of these houses has a well insulated attic, which one?



A: The house with snow on the roof. This house is well insulated so the heat stays inside the house and is not wasted and so the snow doesn't melt. The house on the right which has no snow on the roof is letting heat escape and wasting heat.

Snow and Climate Change



The Polar Bear is adapted to living in harsh freezing environments. The Polar Bear has not just one, but two layers of fur and is so well adapted to the cold that warmer climates will cause the Polar Bear to overheat. Everything from the size of the Polar Bear's ears to his or her tail is designed to prevent heat from escaping; the Polar Bear simply cannot survive if the Arctic climate continues to heat up due to global warming

Climate change may mean a reduction in snow and colder temperatures for example in the Arctic where many animals rely on snow and ice. All animals evolve to their own environment, Polar bears have evolved to have lots of adaptations such as thick fur and body fat which mean they can survive best in a cold environment. Climate change which has caused ice to melt and warmer summers will threaten their preferred environment, and it means Polar Bears have less food to eat and have become a threatened species. According to the U.S. Geological Survey Office, reduction in sea ice in the Arctic can see a loss of 2/3rds of the world's Polar Bear population over the next 50 years. In 2008 during the summer when ice melts the Arctic sea ice dropped to the smallest volume since measurements began in 1979

Change.ie - Teachers wanted

The [CHANGE](#) campaign- is looking for primary school teachers to volunteer on a pilot programme to help combat climate change in the classroom. CHANGE is partnering with St Patrick's College, Drumcondra to produce classroom resources to support primary school teachers on the topic of climate change. Interested teachers should contact CHANGE by emailing info@change.ie or lo-call 1890 242 643. [Full ad text here](#)

Recommended site- [Horton hears a who](#)

Some fun activities around energy based on the children's animated film Horton hears a who can be found [here](#).

Secondary Schools

Photography Competition Launch - Life through a Lens 2009

[Life Through a Lens](#) SEI's annual photography competition for secondary school students will be launched in January 2009.

This year's competition will have _10,000 worth of prizes. All students at secondary schools in Ireland are eligible to enter.

If you would like an information pack which will include a Calendar/Poster, Tips on Energy Saving and Lesson plans on energy please email schools@sei.ie with your name, school name and address. Packs will be sent out in January.

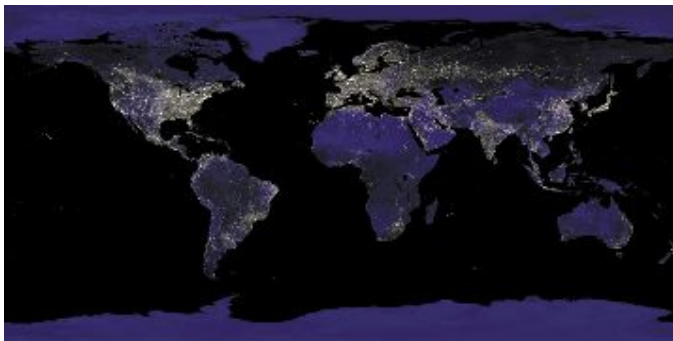
[last year's winning photographs](#) can all be viewed here:



Global Energy Use

Energy use worldwide is very uneven. We in the western world use most of the energy while countries in the developing world use much less of all the world's resources including energy.

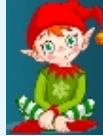
This map shows a composite image of lights on Earth which was created by NASA. The system they used is able to detect very faint visible and near infrared light coming from the Earth's surface. The NASA researchers made this image by superimposing a night time map of the world with the areas where they knew lights were concentrated. The presence of night-time lights correlate with urbanization, economic activity, and industrialization. It also provide a visual mechanism for identifying those regions that are contributing most significantly to the greenhouse gas emissions believed to be responsible for global warming. More information on images such as these on this [webpage](#)



Although we use most of the world's energy in the western world, we won't necessarily be most

affected by climate change. Here is a lesson plan for class which has suggestions for discussing the [Effects of Climate change on different parts of the world](#) from the [Combat Climate change website](#).

Recommended website: Power crazy



Power of One have a Christmas themed game to help you remember to save energy. Power crazed elves have broken into your kitchen and you must race against the clock to stop them before your energy runs out. [Powercrazy weblink here](#)

If you get a high score you can enter the competition board, and you can also send free ecards to your friends and family all customised with your photos.