



## Alex Robertson, Web Manager GTASA Sustainability - Environmental Changes

*Learning for whose sake? The increasing trend towards constructivist styles and negotiated curriculum puts the student in the 'box seat' more than ever before. Teacher methodology sees educators now as part actors, comedians, entertainers as well as facilitators to jolly our audience along.*

*Our delivery needs fit a contemporary audience and message more than ever before, with greater subject diversity and choice. Ways of learning have become more kinaesthetic, to engage students rather than the textbook (dare I say 'academic') learning of yesteryear. However, education is also about futures: we as educators are there to guide students and their choices. There is more to the curriculum than winning students over with their hearts with the latest fad subject. So how can those student numbers be won back? Geography can obtain a loyal following by the presentation of issues and environments, by looking at resource use and the sustainability of our planet.*

*he constructivist approach also needs rigour and structure reinforced by some more traditional teaching styles. Classes have the opportunity to utilise IT, be in the outdoor classroom with those traditional learning styles and to be those kinaesthetic students with fieldwork. The message of choice for these students is looking forward to a sustainable future. Their actions and decisions are based on geographic principles. It is our vocation to ensure they see an awe inspiring world and want to take up the challenge of managing it responsibly. After all, our students are our future leaders.*

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### **ASTER - NASA Home Page**

<http://asterweb.jpl.nasa.gov/>

ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer) is an imaging instrument flying on Terra, a satellite launched in December 1999 as part of NASA's Earth Observing System (EOS).

This project is a cooperative effort between NASA, Japan's Ministry of Economy, Trade and Industry (METI) and Japan's Earth Remote Sensing Data Analysis Center (ERSDAC).

The satellite is being used to obtain detailed imagery of land surface temperature, reflectance and elevation. The information is then used to make maps from the various data sources.

At the very least, they make great desktop computer images or classroom mosaics. Constructively, these satellite photos can be used to interpret different landscape features and give information about change over time in the relevant topics.

The gallery themes include archaeology cities, geology, glaciers and hydrology, general land use natural hazards, and volcanoes in particular.

The Japanese Site (<http://www.gds.aster.ersdac.or.jp/>) is a lot more detailed in structure but has as many magnificent high quality, high resolution images. These are definitely broadband preferred sites but ones which will delight and amaze those who visit them.

### **Redefining Progress**

<http://www.rprogress.org/>

Mathis Wackernagel, co-author of the Ecological Footprint concept, and previous Adelaide Thinker in Residence, has

been a part of the Redefining Progress organisation. His work has been internationally awarded and this web site stems from his work on sustainability.

The Sustainability Indicators section in the left hand menu is the section where teacher activity and lesson plans are located (these are buried under a series of links in the centre section of the page).

The site is worth looking at from a wider perspective as well. Separate web sites for conducting the ecological footprinting are also available. This is one site highly recommended for the SSABSA Sustainable Futures courses, to be implemented in 2006.

### **Solcomhouse**

<http://www.solcomhouse.com/>

A few sites display the 'weird and the wonderful' about the Internet. Whilst the home page might be a bit 'out there', the links presented on this home page look at many of the world environmental issues we face (its parent site, <http://www.theozonehole.com/>, also a site worth visiting for the same reasons).

The site includes themed pages from AIDS to wind power and lots of physical and human geography-based topics in between. This fact sheet approach gives access to a wide range of subjects with basic text arrangements and images to support the argument being presented. The diagrams are sourced and a good reference point for research assessments.

### **Greenpower**

<http://www.greenpower.com.au/go/suppliers>

Here is a school project for environmental sustainability. It is very easy to change over to 'green electricity' (domestic electricity can be derived from renewable resources).

All energy providers guarantee this choice costs no more than your normal power currently costs. You can access your electricity provider online and change the details (if you have your account details handy) or you can telephone your existing provider and arrange this via a 5 minute phone call.

The companies then buy sustainably derived power on your behalf. These alternative energies include solar, biomass, low impact hydro, wind etc for your household electricity. This effectively puts an end to your being responsible for greenhouse emissions for your domestic supply.

It is scary to think that the average household pumps 8 tonnes per year of greenhouse gas into the atmosphere, so it's nice to put a stop to it, especially as the process is so easy.

### **New Scientist - Earth Channel**

<http://www.newscientist.com/channel/earth/>

The online version of the New Scientist magazine pulls no punches. The Earth Section of the online journal (address above) as well as the Life section (<http://www.newscientist.com/channel/life/>) have plenty of information for media journals, theme based studies on places like the polar regions, or material for the Geography Studies People and Environment section.

Although the site is more heavily subsidised in advertising than that of the print version, the quality of information is still present. The content is a good discussion starter for middle school lessons, a site for SHIP (students of high intellectual potential) candidates to visit or to generate discussion of human impact upon our planet.

The first visit may be worth the 'shock value' in looking at the many problems within the world. However, in marketing this positive learning approach is an opportunity for teachers to engage students to learn more about nature and be a part of the solution with conservation or remediation activities to our fragile environment.

Scientific American's Environment Page (<http://www.scientificamerican.com/environment/>) may also be of interest, being in the same ilk of a print journal going electronic.

### **The Stupid Page of Rocks**

<http://www.geocities.com/RainForest/Canopy/1080/>

Quoting web site addresses from Geocities pages is a dangerous art - there is no guarantee the pages will be there next time it is accessed. However, this one is a gem, (pardon the pun).

Some schools still look at geomorphology in their courses. This site gives an online reference guide to a large number of common rock types. The pages include information on the formation, properties and profiles of the rock.

Photos show a close-up of the rock's texture and structure. The geological map symbol reference is also given. It is a USA based site and this shows with some of the rock references.

The site would ideally be a good companion to a unit on the local environment, landscape studies or volcanism in a hazards topic.

### **Victorian Coastal Council - Landscape Setting Types**

<http://www.vcc.vic.gov.au/landscape/index.htm>

Although quite old compared in terms of the Internet (this site was first completed in 1998), this set of resources looks at the sustainability of coastal planning. Architects, designers and coastal conservationists have put forward a guide as to what is appropriate development along Victoria's coastline.

This site within a site (it is part of the Victorian Coastal Council site - <http://www.vcc.vic.gov.au/>) gives a snapshot of the whole Victorian coastline in around 35 pages. Once the relevant snapshot areas are viewed, visiting the Coastal Council's home page would be advised to view the updates on areas under study.

This resource would be a great asset to the middle school and senior coastal studies and a good comparison as to the current developments occurring along the South Australian coastline (<http://www.coasts.sa.gov.au/>).

### **Watercare - Water Learning and Living**

<http://www.watercare.net/wll>

This online curriculum is in its second phase of production. The original release on CD-ROM and the Catchemnts.net/Watercare web site has been spruced up.

This resource has done away with the CD-ROM aspect and is very fast in respect of broadband access; a plus is that it is a lot cleaner and less clunkier than the previous edition.

The Watercare poster has been included on the site and makes a ready resource for teacher and student alike to focus in on discussion points, highlight issues and aspects of water resource use.

It is a valuable resource especially when paired with programmes such as WaterWatch and SaltWatch.

### **Urbanicity**

<http://www.urbanicity.org>

Urbanicity is the worlds leading electronic publisher for all aspects of urban and sustainable development This UN-Habitat sponsored site includes menu items such as local government sites to cities online: urban centres with government or commercial web sites.

The Urban Resources Library section contains links to GIS and other resources, be it web links or case studies on different aspects of urban life.

Whilst a little complex for the average middle school student to handle, this site would be ideal for the Geography Studies Urban Places Option topic and a place for teachers to select appropriate case study cities for junior secondary assessments.