



Worldwise

Geography Awareness
Week

June 23rd-27th 2008

Sustainability



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Geography Awareness Week

23-27 June 2008

This year's theme is: **SUSTAINABILITY**

Welcome to Geography Awareness Week (GAW), one of a range of Worldwise student oriented activities aimed at promoting engaging geography in schools for pupils ranging from early years to post 16 (see <http://worldwise.geography.org.uk> for details of the other Worldwise activities, which now include the *Local Quiz*, the *Online Quizzes* and the new *My Places* competition). We hope that you enjoy using the resources on the following panels either during the designated week, or at another time more convenient for your school.

We hope that examples of students' work showing their engagement with this year's GAW theme will be submitted to us here at the GA (please email details or provide relevant school, college or geography department website links to: rgill@geography.org.uk). The best entries will be showcased via the GA website and the 2008 GA Annual Conference. Entries from the KS3/4 category could be used in support of your school's overall involvement in Worldwise, with a view to possibly being selected to take part in the 2009 Worldwise Challenge (a free-of-charge residential weekend of fieldwork activities for Y8-Y10 students that usually takes place during the month of April). The culmination of the annual Worldwise activities is an invitation for a pupil from each of the top three or four schools taking part in the Challenge to represent the UK at an international geography competition. In recent years these have been held in Tunisia, America, Hungary and Australia.

We believe that the suggested GAW activities, outlined in the following sections, will allow students to appreciate the range of views and issues that surround this important element of geography learning. They should also provide opportunities for students to reflect on and clarify their own views, ideas, values, attitudes and experiences. With improved understanding, young people should start to envision the sort of future that they might want for themselves and for society in general and how *they* can help to shape it.

This year's GAW materials closely link the **Egan Wheel**, **Sustainable Schools** and the **Year of Food & Farming** to **sustainability issues**. The individual resources that follow this introduction aim to cover the following headings:

- Food and Drink
- Energy and Water
- Travel and Traffic
- Buildings and Grounds
- Inclusion and Participation
- Local Well-being
- Purchasing and Waste

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Food and Drink

Where does our food come from? / How is our food grown? / What are “food miles”? / How does farming affect the environment? / What is it like to be a farmer/food producer? / How is farming different in ‘rich’ countries compared to ‘poor’ countries? / Why are the methods of food production changing? / How can the world provide enough food to feed a growing population? These are all curtail questions as we move towards becoming more responsibly aware of our actions and how they are interconnected with others and the environment of other parts of the globe. We should therefore be guiding students of all ages towards thinking about how sustainable the food that they eat is.

Useful background websites can be found at:

Egan Wheel: www.microcoaches.co.uk/who/eganwheel.asp

Year of Food and Farming: www.yearoffoodandfarming.org.uk/Resources/

FACE (Farming and Countryside Education): www.face-online.org.uk/index.php

Where does food come from? (KS1)

Focus on identifying different types of food and investigating where they come from i.e. animal or plant and then which specific animal or plant. Examples: crisps (potatoes), eggs (hens/ducks), milk (cows/goats), flour (wheat) & wine (grapes).

Fruit & Vegetables (KS2)

Focusing on a range of fruit and vegetables that can be obtained from a greengrocers shop, a supermarket, a farmers’ market and an allotment, identify the items and their country of origin. Introduce the concept of seasonality. Discuss the advantages and disadvantages of seasonal foods from both a producer’s and a consumer’s perspective.

Why does farming matter? (KS2-4)

Using the following website as a starting point, there can be found: an activity book containing a range of fun tasks using Personal Learning and Thinking Skills appropriate to Science, Geography and Citizenship/PSE/Work Related Learning, video containing interviews with farmers about their lives and work, three sets of picture cards, an image gallery, and posters detailing how a range of different farming types operate. These could be used to provoke discussion work around the questions: Where does our food come from? How is our food grown? What is it like to be a farmer?

Primary/KS2:

http://www.face-online.org.uk/index.php?option=com_content&task=view&id=1111&Itemid=997

Secondary/KS3-4:

http://www.face-online.org.uk/index.php?option=com_content&task=view&id=1130&Itemid=1002

From farm to fork! - Board game (KS2-3)

The aim of the activity is for students to match different foods to their food sources, e.g. bread to wheat. When the first player has matched all the foods on their plate to the correct food sources, they are the winner. The activity can be played with 2 to 4 players and would ideally suit Food Technology at either KS2 or 3. The board, cards and instructions on how to play can be downloaded from the following website:

<http://www.foodafactoflife.org.uk/Sheet.aspx?siteId=13§ionId=56&contentId=194>

There are also many more interactive games and puzzles at:

<http://www.foodafactoflife.org.uk/section.aspx?siteId=13§ionId=54>

Eat this! Meat vs. Veggie debate (KS4-5)

This thought-provoking video is ideal for stimulating discussion and debate about the way we rear animals for food in Britain today. The movie follows four teenagers with very differing views, as they ask hard-hitting questions about meat. Where does it come from? What is eating it doing to us, the animals and the environment? These activities cover:

Citizenship/ PSE, English and Religious Education/General Studies/Critical Thinking.

Video (able to be viewed from website, doesn’t require downloading):

http://www.animalaid.org.uk/h/f/CAMPAIGNS/blog/4/?be_id=12

Student activities pack:

<http://www.animalaid.org.uk/images/pdf/studact/eatthis.pdf>

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Energy and Water

We get most of our **energy** from non-renewable energy sources, which include the fossil fuels -- oil, natural gas, coal and nuclear. Electricity for example, "energizes" our computers, lights, fridges and washing machines. Yet many people are concerned about the increasing consumption of energy. Scientists predict that energy demand will rise by more than 50% over the next 25 years.

Water experts are warning that declining supplies over the next 20 years will become as big a problem as global warming. Globally, water usage is predicted to double by 2050. This rise will be driven by irrigation and agriculture to feed the world's growing population. It is feared that as water becomes scarcer there will be increasing conflicts over its use and management.

Activity 1 (KS1+)

Energy at home – Focus on the uses of water, gas, electricity and petrol/diesel in and around the home. What are each of these resources used for? Who are they used by? When are they used? Where are they used?

Activity 2 (KS3+)

Thirsty work – this activity is all about looking at where we find water in the world, and then where water is most used. To do this you will need to view (or download) two distributions maps from the World Mapper website. Go to http://www.worldmapper.org/textindex/text_resources.html.

Use maps '102' and '104' which are for global water resources and water consumption. Pupils can describe and explain the differences, even producing their own simplified and annotated world water maps. BBC news has an excellent short video which looks at 'water stress' from the <http://news.bbc.co.uk/2/hi/science/nature/5269296.stm> - this could be used as a starter activity to contextualise the issues.

Activity 3 (KS4+)

Energy stats – go to the Energy Outlook site (<http://www.worldenergyoutlook.org/>) and download the latest version of the report (2007 or 2008). Get the students to work in groups to select the 'consumption' section from the report. Then instruct them to copy and paste graphs, images and data into their own group PowerPoint's which illustrate the key points within the chapter. Go for a maximum of about 5 annotated slides per group.

Activity 4 (KS2+)

How much do I use at home. This activity is based around a personal or family energy and water audit. For younger children encourage them to create their own diary of either water or energy use (this could be personal or a family). This could be supported with photographs. There is an opportunity for some numeracy, i.e. totals (litres per day of water or Watts per day of electricity). For older students there is a more formal process described by the Carbon Trust ('energy walk round' audit) at: <http://www.carbontrust.co.uk/publications/publicationdetail?productid=CTL003>

Activity 5 (KS2+)

Energy and water futures. Get the students to work in small groups to consider how they can reduce their demand for either water or energy (both electricity and driving etc). Ideas can be presented as a series of poster spider diagrams. For some inspiration there are a host of ideas on the Waterwise website: http://www.waterwise.org.uk/reducing_water_wastage_in_the_uk/house_and_garden/save_water_at_home.html

Older students can make predictions (by drawing graphs) about how they think demand for household water will change in the future. They can compare these to published ideas about how the government thinks demand changes may be realised, e.g. <http://www.defra.gov.uk/environment/water/strategy/pdf/future-water.pdf>

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Travel and Traffic

Transport Activity (based on the Egan Wheel)

Use De Bono's *Thinking Hats* to discuss a local transport issue e.g. a by-pass scheme / safe cycle routes / development of a new public transport scheme.

De Bono's colours for his **Thinking Hats** represent six different thinking strategies:

The **RED** Hat - represents emotional thinking

The **YELLOW** Hat - represents positive thinking

The **BLACK** Hat - represents critical thinking

The **WHITE** Hat - represents purely the facts

The **GREEN** Hat - represents creative thinking

The **BLUE** Hat - represents the big picture looking at the issue from different people's viewpoints

- Use a local map, mark on congestion points / accident black spots, and ask pupils to solve the local traffic problems.
- Use a map of a town which needs a by-pass or a river which needs an extra bridge. Ask pupils to decide where the new link should go and explain their reasons.
- Start an investigation into people's use of various kinds of transport locally and produce a report based on the evidence.
- Ask pupils to keep a record for one week of all the journeys they make. Ask them to identify those which were already environmentally friendly and then to identify more sustainable uses of transport for the others. What impact would changing to more sustainable transport have on their lives and those of their family?
- Take pupils to visit local transport features such as bridges and viaducts. They could make sketches to show the links with other places and study the architecture and engineering involved. Ask how the area would function without this part of the infrastructure.
- Take pupils on a field visit to a local town to investigate parking issues. They could investigate car parks / charges / time limits / disabled provision / on-street parking. They could interview shoppers / visitors / retailers to identify adequacy of provision and alternatives. On return to the classroom they could have a discussion on the issues and suggest improvements. They could then write to their local council giving their suggestions.
- Have a debate e.g. "This house believes that town or city X should be traffic free".
- Have a quiz e.g. using pictures of different local routes ask pupils to identify the locations.
- Try the "Plus / Minus / Interesting" technique (by putting forward good points, bad points and interesting questions on a particular idea) on the hypothesis that all cars should be banned.

Specifically for KS1/2

- Focusing on the "Walk to School on Wednesdays" initiative, arrange a role play/simulation asking the question *should we walk to school on Wednesdays?* Pupils can be allocated the following roles – as pupils, parents, teachers, governors, local residents and the police. This could also involve finding out more about the "Walking Bus" idea. Pupils could also be asked to plan their own safe walking route and a strategy to implement it.

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Buildings and Grounds

1. Is your school well designed and built?

Use the continuum below to think about what makes a well-designed school. Take pictures of different parts of the school building and ask pupils to identify them. Ask them to go out and find the places and complete the continuum for each place selected.

Attractive	1	2	3	4	5	6	Unattractive
Safe	1	2	3	4	5	6	Unsafe
Useful	1	2	3	4	5	6	Unused
Lots of open space	1	2	3	4	5	6	No open spaces
There is a positive feel / optimistic mood	1	2	3	4	5	6	A negative feel / threatening mood

The pupils can be asked to choose additional pairs of words that may be used to indicate the quality of the building and the surrounding area. Which areas of the school would you select as being in most need of improvement?

2. Making your school more eco-friendly

Friends of the Earth suggest some of the following ways to make a school more eco-friendly. How many of them do you have or could you introduce in your school during Geography Awareness Week?

- Switch off - Computers left on overnight or over lunch waste energy. If you're not able to switch off the machine, get into the very good habit of switching off the monitor. Computer monitors use 60% of the energy needed for the whole computer.
- Find an environmental event in your area - Green fairs; talks; training courses/workshops.....and take part e.g. organize one in your own school/community.
- Set up a school recycling scheme. Appoint pupil recycling officers. A quick scan through the phone directory should provide some numbers for recycling collectors, local waste paper merchants or national paper collection companies. As well as paper, many companies will recycle a range of other items too.
- Encourage your colleagues to print less by sticking a sign above the photocopier, such as: 'Think before you print to save energy and paper' or 'Do you really need all those copies? If you do, then print double sided.'
- Encourage pupils (and staff) to walk to work.
- Plant a vegetable garden or build a pond.
- Only use energy efficient light bulbs.

3. Other sources of information about reducing a school's carbon footprint

www.teachernet.gov.uk/sustainableschools/

www.suschool.org.uk/

www.ecocentre.org.uk

www.cabe.org.uk

www.futureschools2008.co.uk

<http://www.kingsmead.cheshire.sch.uk/>

<http://www.teachernet.gov.uk/growingschools/>

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Local Well-being

Our well-being is closely linked to our connections with other people and our health, rather than just money and material goods. People who value their family and friends, see them regularly and stay healthy are usually happier and have a more sustainable lifestyle.

What makes you happy?

- Pupils can write down five things that make them happy then compare them with a partner to try and come up with a top three.
- Give feedback to the class and each pair's top three displayed.
- Carry out a discussion about the balance between money and goods making us happy as opposed to friends, family and healthiness.

As a nation the UK's economic output has doubled in the last 30 years. We are no happier as a nation. Why?

- Discuss with the class the role of advertising. Does it make us unhappy because it makes us feel less well off and because we compare ourselves to people richer than ourselves.
- Pupils could put together a display of advertising that could make us feel unhappy, then put together a display of advertising that makes us feel happy. How does the content and images in the 2 displays vary?
- Ask young people how important health is to them in making them happy? Why do young people think happy people tend also to be healthy people? Why does research show that 'happy' people live up to seven years longer than 'unhappy' people?

The Happy Planet Index (HPI) report contains a wealth of information on countries from across the globe. The HPI is an innovative measure of human well-being. The UK is 108th in the index, pipped by Libya, just beating Laos, Japan is 111th, France and USA are 150th and Russia 172nd.

- It would be highly relevant for young people to draw comparisons between information from this document and that which they currently have on countries they are studying as MEDCs and LEDCs.
- Why do such variations occur between different parts of the World?
- If the HPI is measured by our feeling of well-being, life expectancy and ecological footprint, what do we need to do in the UK to move up the index from 108th?

In first place is Vanuatu, an archipelago in the western Pacific.

- Pupils could do an internet search and google earth to put together a presentation outlining why this is top of the Happy Planet Index and how it compare with the UK or any other place.

KS3-5 students could look at Bhutan's use of Gross National Happiness to increase its nation's happiness, rooted in the Buddhist religion and centred on 9 domains; living standard, health, education, eco-system diversity and resilience, cultural vitality and diversity, time use and balance, good governance, community vitality and psychological well being.

Bhutan, Gross National Happiness: www.fuzzysignals.com/archives/2004/05/04/000088.html or www.globalsystemchange.com/GSC/Articles_files/GNH%20Bhutan%202-4.pdf (latter suitable for KS5)

European HPI: www.happyplanetindex.org/european-map.htm

Global HPI: <http://www.happyplanetindex.org/map.htm>

Vanuatu websites: www.vanuatutourism.com/ or www.cia.gov/library/publications/the-world-factbook/geos/nh.html

Happy Planet index: <http://www.itint.co.uk/hpisurvey/>

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Inclusion and Participation

Who decides?

Governance includes the various ways in which political, economic, social and cultural life is coordinated at global, national, regional and local levels. Participation might be used to suggest local people take a role in the future direction of their community, particularly in public service provision and permissions granted to individuals and the private sector.

[Source: www.ascskills.org.uk]

- What are the skills required for people in work, or as residents, to become active in sustainability?
- See www.geography.org.uk/projects/buildingsustainablecommunities/skills
- Using different local geographical contexts, encourage learners to elaborate points of view from many different perspectives. Whose point of view might be missing? How do we ensure the full representation of views? What barriers result in non-participation?

Eco-Town plans set the alarm bells ringing

The eco-town plans ‘have proved controversial in some areas with campaigners saying the idea of environmentally-friendly’ new towns is just a positive sounding way to evade planning controls and let developers run riot. Most of the planned sites are expected to face local opposition, something thought to be worrying the Government.” [Source: Paul Langan, *Wharfedale and Airedale Observer*, 9 Apr 2008 <http://tinyurl.com/6c2av3>]

Operation stack lorry park

Local newspapers and their websites, such as the source above, are highly recommended for viewpoints from a variety of perspectives. Web-based television channels also provide insight to the process of consultation almost as if you were there. KentTV.com shows the press conference on the proposed ‘operation stack lorry park’. The leader of the county council refers to ‘laborious consultation’: meaning officers and others work hard to achieve inclusion and participation. Seeing part of this nine-minute programme would support pupils’ role-play activity on any issue. [Source:

<http://tinyurl.com/62z1wh>]

- Who is on the press conference panel?
 - What voluntary-sector organisations might be represented at the press conference?
- The audience, but not identified, includes an MEP and a head of the borough planning department.

It has been revealed that a private developer has had an option on purchasing the land from the farming landowner for five years.

- How are these players involved in consultations?

Is what we do the same as the way we think?

Defra has published a ‘framework for pro-environmental behaviours’. Seven groups are plotted against ‘willing to act’ and ‘ability to act’: Positive Greens, Honestly Disengaged, Stalled Starters, Cautious Participants, Waste Watchers, Concerned Consumers and Sideline Supporters. [Source: www.defra.gov.uk/evidence/social/behaviour/index.htm] Can you match the above group descriptors with the following statements?

- 1 - I think it’s important that I do as much as I can to limit my impact on the environment. (PG=18%)
- 2 - ‘Waste not, want not’ that’s important, you should live life thinking about what you are doing and using. (WW=12%)
- 3 - I think I do more than a lot of people. Still, going away is important, I’d find that hard to give up...well I wouldn’t, so carbon off-setting would make me feel better. (CC=14%)
- 4 - I think climate change is a big problem for us. I know I don’t think much about how much water or electricity I use, and I forget to turn things off. I’d like to do a bit more. (SS=14%)
- 5 - I do a couple of things to help the environment. I’d really like to do more, well as long as I saw others were. (CP=14%)
- 6 - I don’t know much about climate change. I can’t afford a car so I use public transport. I’d like a car though. (SS=10%)
- 7 - Maybe there’ll be an environmental disaster, maybe not. Makes no difference to me, I’m just living life the way I want to. (HD=18%)

How do we ensure education for sustainability will be inclusive and participative?

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Purchasing and Waste

Think twice. Shopping is the nation's favourite pastime. We love to buy / purchase things whether it is a car, a tee-shirt, a lap top or just a burger. But hang on - where did it come from? / what went into making it? / who made it? / how much were they paid? / how did it get to us? And what happened to the item that your recent purchase may have just replaced?

Activity 1 (KS2 upwards)

List five things you or your family have bought in the last month and make a note of the answers to as many of the questions listed above that you can. Then ask yourself the big question- Is the use of this product sustainable or put another way, can we go on using it without harming the environment or the lives of people in the future? **So, think twice before you buy** - don't just sit there, do something positive. Perhaps your answers to the above activity suggest we could shop in a more sustainable way. Buying in a way which does not damage the environment or have a bad effect on other people's lives now and in the future is called **ethical purchasing**.

- **Positive purchasing** is buying an environmentally friendly product
 - **Negative purchasing** is not buying certain products (those not produced in a sustainable way)
 - **Company based purchasing** is supporting or avoiding certain companies based on their environmental credentials
 - **Fully screened approach** is comparing companies / products before you buy to decide which is the most sustainable
- Are you an ethical purchaser? For example, would you buy a tee-shirt made using child labour? For more about ethical purchasing go to http://en.wikipedia.org/wiki/Moral_purchasing

Activity 2 (KS 2 upwards)

Conduct a survey in your class or with people at home by asking the following question. Have you bought anything recently, or avoided buying anything, because of how environmentally friendly / sustainable it is? It could be something as simple as a bag of peat free compost from the garden centre or free trade chocolate. **Waste not, want not.** This old saying suggests that avoiding waste is a good idea whether it be money, household goods or food, (a recent survey suggested that we waste 30% of all the food we buy). For more about waste go to www.defra.gov.uk/ENVIRONMENT/WASTE

Activity 3 (KS3 upwards)

Using your local council website or a leaflet about your council's waste recycling services, find out where:

- There are local recycling centres for paper and glass;
- There are household waste recycling centres where waste can be taken for sorting before being sent on for recycling;
- Waste which is non recyclable is finally dumped e.g. in a landfill site.

A 21st Century Industry. When we think of factories we think of somewhere where goods are manufactured using raw materials and parts from other factories to make or assemble new products. In the future, manufacturing raw materials from waste will become a big industry and every local council will need to have or be near to one. A typical site in the future could well include:

- A household waste reception centre where local people can bring their waste
- A visitor centre for schools and the public to learn more about the importance of recycling
- A materials recovery facility where waste from recycling bins can be sorted
- A composting area where garden waste can be composted before being spread on fields / sold for garden use
- A reception hall for 'black bag' rubbish sealed to keep in smells
- An autoclave plant where 'black bag' rubbish is 'cooked' and sterilized and any glass / metal etc separated out
- A digestion plant where the residue is mixed with waste water to produce methane which can be used as a fuel to produce electricity and steam for use in the whole plant.

Activity 4 (KS 3 upwards)

If your waste already goes to a site like the one described above, discuss why you think its present location was chosen. If not, then choose some possible locations for a new one in your own local area and decide which would be the best one, remembering to think about both the advantages and disadvantages of each site considered. For more information go to www.vtplc.com/environmentalengineering and click on 'Wakefield PFI'.