

Waste and recycling

Resources:

Bowden, Rob

Waste, Recycling and Reuse

Hodder Wayland 2001, ISBN 0750232463

Looks at the impact human development is having on the planet and how this could affect our future.

Grey, Alexandra

The Environment and You

Heinemann Library 2000, ISBN 0431035482

Looks at the impact of humans on the environment and what can be done to preserve it for future generations.

Harlow, Rosie

Rubbish And Recycling

Kingfisher Books 1995, ISBN 1856973824

Problems of producing too much rubbish and explains how recycling can make the environment a better place.

Knapp, Brian

DON'T Throw It Away!

Atlantic Europe Pub. 1991, ISBN 1869860306

Find out how to recycle.

Parker, Steve

Waste And Recycling

Paperback, ISBN 0431183015

Discover the causes and effects of wasting our resources.

Webster, Ken

Rethink Refuse Reduce

FSC Pub. 2004, ISBN 1851832862

Education for sustainability in a changing world.

Protecting Our Environment

Waste Education Packs and DVDs for KS 1 to 4 from the Tower Hamlets Waste Education Officer Phil Maxwell E: phil.maxwell@towerhamlets.gov.uk or T: 020 7364 6774

Websites:

Children's scrap project:

www.childrensscrap.co.uk

The Children's Scrap Project is a registered charity which collects, stores and distributes clean, safe industrial waste to schools, nurseries, colleges, special needs groups, churches, hospital wards, playgroups, community groups and charitable organisations involved in education.

Darcy Turner: www.darcyturner.com works with schools using recycled materials to create sculptures, and usable objects for the classroom.

Big Book Box Project:

www.toymakingactivities.com

takes school groups through a travelling exhibition of handmade toys, made mainly from recycled materials, practising simple manual skills. Runs 12 different toy making sessions with storytelling.

Global Footprints: www.globalfootprints.org

An introduction to the concept of global footprints. For teachers there is background information and numeracy and literacy based printable classroom activities.

www.globalfootprints.org/teachers/matrix.htm

The children's part of the site includes games, facts, poems, stories, quizzes, and web links on the subject of sustainability.

Recyclezone: www.recyclezone.org.uk

The site for schools, children and teachers that tells you what's what in the world of waste!

Waste Online: www.wasteonline.org.uk teachers pack; search under 'education' then type in 'waste information sheets', click on 'Dustbin Pack Information Sheets'.

Ollies World: www.olliesworld.com/uk recycling for schools and teachers.

www.recycledproducts.org.uk see what **recycled products** are for sale in the UK

Eco Schools: www.eco-schools.org.uk provides ideas for action and class activities on litter, waste etc.

Composting: www.organicgardening.org.uk, click on 'What we do' then 'Schools' then 'Garden Organic for Schools'.

Groundwork East London: www.ground-level.org is a strategic environmental regeneration organisation, working to improve the quality of the local environment.

Energy Certification for Schools: www.est.co.uk/schools get your school involved in the programme.

Save -a- flush: www.save-a-flush.co.uk water saving devices

www.waterintheschool.co.uk set up a **water metering** project and save £5000 a year:

Water Aid: www.wateraid.org.uk dedicated exclusively to the provision of safe domestic water, sanitation and hygiene education to the worlds poorest communities. Look at their "Learn Zone".

Water for Life: www.un.org/waterforlifedecade International decade for Action

The Carbon Trust: www.thecarbontrust.co.uk/energy find out about your energy use in school

Friends of the Earth & Climate Change: www.foe.co.uk/campaigns/climate

For more information contact:

HEC Global Learning Centre

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www.globalfootprints.org



promoting global learning in schools

Waste is not just litter - even though many people confuse the two. We get waste from all sorts of activities. If it is managed properly we need never have litter. Litter is simply badly managed - or unmanaged - waste, waste that is left lying around. In this leaflet we will also talk about energy waste and water waste.

Material Waste

If you throw something away it does not disappear. In London, barges take it down to a landfill site. There are currently 12,000 landfill sites in the UK. Once all this waste has been lying around for a while all the materials mixed together start to rot and let off a mixture of gases. These gases can cause fires and explosions and they also contribute to global warming. Some of the materials seep into the ground and pollute it and nearby rivers. Household waste is increasing by three percent a year and we are running out of land in the UK to fill! Some of our rubbish is burned in incinerators, but the problem with this is it can cause air pollution.

Did you know each household throws away one tonne of rubbish a year? That's 150 black sacks!

In 2000 the government set targets to reduce household waste. By 2005 they wanted to reduce the waste we throw away by 25 percent. In 2006, Tower Hamlets households reduced their waste by 11 percent.

Water Waste

Every year in our households we are using more and more water. On top of that more houses are being built, using up more water. Reservoirs are running very low. This means that soon there will not be enough water for us to use. Hosepipe bans are now common in the South of England.

Events

- March 1** Renewable Energy Day
- March 22** World Water Day
- April 30** World Earth Day
- June 5** World Environment Day
- June 17** World Day to Combat Desertification and Drought

Energy Waste

We waste a lot of energy in our homes. Industry also takes a lot of energy making new items.

Energy comes from non-renewable sources like gas, oil and coal, which we are running out of. Energy also comes from renewable sources like solar power, wind power and water power.

The Global context

We are using up the earth's natural materials. If we do not recycle, we also use more energy to manufacture items. The more energy we use, the more air pollution we are creating. Air pollution is one of the causes of accelerated climate change.

Millennium Development Goals

The eight Millennium Development Goals (MDGs) were agreed at the United Nations Millennium Summit in September 2000 and nearly 190 countries have subsequently signed up to them. The goals are international targets for reducing global poverty. They aim to lift around 500 million people out of poverty by the year 2015. If this happens, fewer women will die in childbirth, fewer people will die from treatable diseases, many more boys and girls will go to school and the lives of millions of people will improve dramatically.

One of the UN's **Millennium Development Goals** is :
to Ensure Environmental Sustainability;
to integrate the principles of sustainable development into country policies and programmes;
to reverse loss of environmental resources;
to reduce by half the proportion of people

Save Water

Save water by putting a "Water Hippo" in your toilet cistern; this will save one litre of water every flush. Phone us on 020 7364 6405 for free water-saving devices to use in your cisterns at school. Save a litre each flush.



Case Study: Is it really waste?

One person's waste is another person's raw material. Businesses now talk of "secondary raw materials" rather than waste and by-products, they are looking at ways of lowering production costs of materials, by marketing and selling their waste and by-products as secondary raw materials.

In Burton-on-Trent, there are a number of breweries that produce yeast. The Marmite factory in Burton-on-Trent takes it and converts it into Marmite yeast extract. If you look at the ingredients list on a jar of Marmite, you will see the main ingredient is 'yeast extract'. Since 1902 the breweries' waste has been used as the raw material for Marmite.

"The UK brick industry has for the past 15 years been seen as a potential repository for a number of by-products, secondary raw materials, and waste arising from other industries and processes.

Far from being at the back of the queue when it comes to the use of recycled waste materials in UK manufacturing plc, the UK brick industry has, and continues to be a leader in the assessment and use of these materials. From the recycling of wet clay off cuts, crushed fired waste (grog), scrubber residues, and sand/stains back into the production process, through to the more established utilisation of externally sourced materials such as pfa (pulverised fuel ash), slag, waste water treatment residues (sewage filter cake, incinerated sewage sludge ash (ISSA), coal and coke fines washings (breeze) into the body of the bricks. "

Report Presented at the Brick Development Association - Manufacturing Executive Meeting, September 2005
Email: andrew.smith@ceram.com

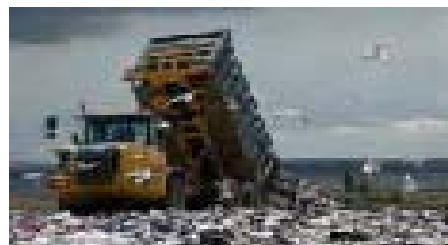
Case Study: Flintham Youth EcoTeam

Global Action Plan is the practical environmental charity that helps people to make positive changes at home, at work, at school and in the wider community.

Seven young people from the Nottingham village of Flintham, aged between 12 - 17 year old, formed our first ever youth EcoTeam. They cajoled their parents into cutting down household waste, composting and saving energy and water. Their efforts saved their families an average of £19.28 per week and reduced waste going to landfill by half.

Tom Reacher, the youngest member of the team was fired up by his experience and decided to expand his hobby of keeping ducks and chickens to provide eggs for sale to villagers. His fowl produce over 200 eggs a week, which he delivers by rollerblade to , "*increase the danger level!*".

Visit www.globalactionplan.org.uk



Mucking landfill site where London's waste is sent.

Reduce

Most of the things we buy today come in packaging. Most of the time the packaging is thrown away and ends up in a landfill site. Do we really need to buy so much? We could ask not to have so much packaging when we buy things. We could **reduce** the amount of packaging we get.

Maybe when we go shopping we could think about whether we need to buy so much at once, for example do we need to buy a whole bag of fruit, if we end up throwing away some of it because it has gone bad; we could **reduce** the amount that we buy.

We could buy stronger material bags and reuse them each time we go shopping, **reducing** the amount of plastic bags we use.

Reuse

Most of what we throw away could be **reused**. Many of the things that get taken to a recycling plant could be **reused**. Many things could be taken to a second hand shop and sold to people who want or need them.

Repair

One person's discarded waste could be **repaired** and re-used by another person who needs that item.

Recycle

Sometimes we can't help buying materials like paper, cardboard, glass, tins and plastic bottles, to bring our food and drinks home from the shops. Instead of throwing them in the bin we can **Recycle** them; we can have them taken to places where they will be sorted, cleaned and turned into something new.

Save Water

We can reduce the amount of water that we use:

- Don't leave the tap running when washing your teeth; after one week enough water is wasted to fill a small paddling pool.
- Take a shower instead of a bath.
- Put a water saving device in your toilet cisterns.
- Make sure you turn off the tap properly; a dripping tap left for one day wastes enough water to fill 12 drinks cans.

Save Energy

Everyone can take steps to save energy, from switching off lights when leaving a room, to closing your curtains at night to keep heat in. Turning your heating down by one percent saves a lot of energy.

Try not to turn the thermostat up over 20 degrees. Leaving your TV, video or computer on standby wastes a lot of energy. Heating water for baths and showers, creates three times as much carbon dioxide than the entire iron and steel industry.

Composting and wormeries

We can reduce the amount of waste that we throw into our bins by composting food waste, it reduces what we throw away, and helps the plants in your garden. If you don't have a garden, but have a balcony you could recycle your kitchen waste by using a wormery and feed your plants with the liquid that is produced.

Ideas For Action

Visit **Global Footprints** for downloadable activities: "Life is in a Hole, Who deserves the water, Polythene: bags of trouble, Ten litre limit, Waste Audit, The rubbish split."

www.globalfootprints.org/teachers/matrix.htm

Recycling and Geography

Visit the local recycling centre and/or landfill site. Express views on features of the local environment, including tidiness and noise. How can things be improved?

Recycling and art

Make junk models. Design a poster or logo to encourage recycling.

Carry out a waste audit

What is in the school bin? Students would identify the problem areas, devise a research strategy and collect data (questionnaires, photographs, etc), then devise strategies to solve the problems identified.

Carry out an energy audit

A school based project aimed at examining how energy is produced and used. Students could identify the environmental implications of energy production and the use of natural resources, the problems areas of energy waste in schools and at home, and develop a strategy for research and data collection, before making judgements and devising action plans to conserve energy. Visit www.est.org.uk/schools

More ideas that could be explored

At home and at school:

- ways of saving resources such as paper, electricity, water
- ways of promoting healthy eating
- ways of reducing waste, such as buying snacks with less packaging on them, composting fruit and vegetable remains
- ways of reusing and recycling materials, containers, toys, books - for example, washing out and decorating used tins for plant pots, storage containers or sculptures, taking unwanted saleable items to charity shops or jumble sales
- ways of travelling to school which use few resources

At home:

- ways of buying less - use the library and video hire shop instead of buying too many books or videos, mend things, and make things.

At school:

- information about the present biodiversity of the school habitat, and how it could be increased
- information about the sustainable development policy of the school, or if there is not one in place, ideas for what could go into one
- information about a local scrap project for the provision of art materials

In the community:

- information about the practices of local businesses on sustainable development issues such as Fair Trade, use of tropical hardwoods or recycling
- ways of stating opinion about and raising public awareness of local issues such as the local environment, road-building or house-building schemes, provision of green areas, recycling
- information about local sustainable development initiatives
- information about sustainable forms of energy such as solar and wind power

Latest Waste News

In December 2007, Thurrock Thames Gateway Development Corporation (TTGDC) approved a three year extension to the Mucking landfill site in Thurrock. It said that Mucking landfill site where London's waste is sent, must then be restored to a country park and nature conservation area by the end of 2011. The areas will be managed by Essex Wildlife Trust.

Essex Wildlife Trust is the county's leading conservation charity. Managing 87 nature reserves covering 7,500 acres. They work in partnership to offer free access to wildlife-rich, high quality, green open space.

Cory, who manages the site and the Essex Wildlife Trust are currently discussing public access and associated health and safety considerations.