Waste Watch's education newsletter
spring 2005
issue 7

waste WATCH

wasted

contents

weee
short circuiting electrical waste

www.wastewatch.org.uk
wasteline 0870 243 0136

wasted is published by Waste Watch, a leading environmental organisation promoting sustainable resource use in the UK by campaigning for all areas of society to reduce resource consumption, maximise resource reuse, and increase the percentage of waste recycled.

editorial

Welcome to the spring edition of wasted!

In August this year, new legislation will put recycling electrical waste at the top of the agenda. That's why we're dedicating this edition to fridges, batteries, television sets and microwave ovens – in fact, every conceivable piece of electronic equipment you can imagine. It's time to stop binning our electrical and electronic waste, and we've put together an electrifying set of teaching resources to spark the imagination of the younger generation.

The cover illustration shows an image produced by the RSA's WEEE man project, which will unveil a structure in April made from the electrical waste that one person generates in a lifetime. www.rsa.org

editor
Richard Newson

editorial team
Waste Watch education staff

Waste Watch
56-64 Leonard Street
London EC2A 4JX

t 020 7549 0300
f 020 7549 0301

www.wastewatch.org.uk

For all recycling enquiries call
Waste Watch Wasteline
0870 243 0136

wasted is designed by Banjo Design and Print Ltd. and printed by Crowes of Norwich on 100% post consumer recycled paper.

newsupdate

Education campaign gathers pace

Waste Watch has launched a campaign calling on Defra to provide better funding for waste education – and so far over 160 organisations and individuals have lent their support.

The campaign was launched by education manager Lisa Cockerton at the Waste Watch annual seminar and AGM at the Royal Institute of British Architects in December 2004.

Since then, the support for Waste Watch shown by cross sectoral groups has been outstanding, including the Local Authority Recycling Advisory Committee (LARAC).

Waste Watch is currently seeking meetings with both Margaret Beckett and Elliot Morley to discuss its demands for Defra to

- give urgent priority to the allocation of a proportion of landfill tax revenue to waste education based work in schools
- make provision for a grant scheme for which waste education based projects are eligible without the need to prove a direct effect on household recycling targets
- agree to work with other government departments including DfES and the Treasury to establish a wider funding framework encompassing broader education for sustainable development (ESD) issues such as energy and water

Celebrating SWAC in the north

12 schools from Nottingham and surrounding districts of Nottinghamshire played their part in the national Big Recycle week in October with a special Schools Waste Action Club (SWAC) event held at Nottinghamshire County Hall.

The event gave the children the opportunity to share both the successes and difficulties they had encountered when finding ways to reduce, reuse and recycle waste at school.

Following the presentation of awards to the best recyclers of paper and textiles, the schools took part in a waste free lunch. Then it was coats and wellies on for a fascinating and highly enjoyable visit to see waste management in action at Waste Cycle, a plant which recycles builders' waste.

Another special SWAC event, 'Learning from Rubbish', took place a few weeks later in the wonderful surroundings of York's medieval Guildhall. 120 children and staff from 11 York primary schools attended, and pupils from St Mary's, Askham Richard and Headlands schools gave presentations about how they had successfully tackled waste whilst working with North Yorkshire SWAC.

In the afternoon, the children applied the lessons they had learned from dealing with waste to other aspects of the school environment through workshops on water, energy and wildlife run by Yorkshire Water, York Energy Efficiency Advice Centre and Yorkshire Wildlife Trust.

At the start of December, Caty Darby, the Nottinghamshire SWAC education officer, started maternity leave during which time she has been replaced by Edwina Woodland. Meanwhile,

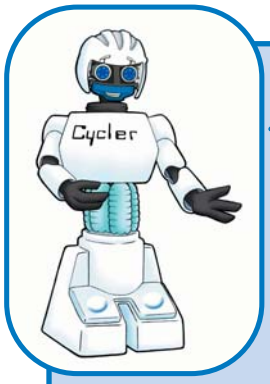
Pupils from Round Hill School get to work during a special SWAC event during the week of the Big Recycle

Melanie Chew, SWAC education officer in North Yorkshire for the past year and a half, has joined Waste Watch's Recycle Western Riverside project in London. The fight against waste in North Yorkshire schools continues however through the hard work of Irene Wise and Nick Lishman.

Green Dales

SWAC North Yorkshire is teaming up with the Richmondshire District Council, the Youth Hostel Association, Save Waste and Prosper, and the Waste and Resources Action Programme, to provide better recycling across the Yorkshire Dales. The project, opened by William Hague MP, provides boxes to collect and store recyclables, and new recycling banks in Reeth and the youth hostels in Grinton and Keld.

Children in the Dales working with SWAC N Yorks have been helping to promote the scheme by collecting pledges to recycle from the local community. The more pledges, the more recycled prizes they will win for their schools.



Meeting the minister

All three Cycler robots, and the dedicated team of education officers who are behind the hugely successful schools programme, gave a special presentation at the annual Biffawards award ceremony. The event is a chance to recognise the good work done by the diverse projects funded through Biffaward landfill tax credits. Guest of honour was Elliot Morley MP, minister for the environment, who chatted happily with the Cycler team after they had amazed the crowd with a rare group performance by all three rapping robots. Waste Watch is currently seeking a more formal meeting with Mr Morley to ask why waste education projects like Cycler have seen funding sources dry up since reforms to the landfill tax credit scheme two years ago.

Elliot Morley MP, minister for the environment, meets with recycling 'heroes' during the Biffawards

Cycler is a recycling hero

Cycler has been chosen to appear in a stunning new calendar featuring 'recycling heroes'. The calendar, shot by celebrity photographer Terry O'Neill, has been produced by the Recycle for London campaign, and seeks to recognise outstanding achievements in recycling. Cycler, who has visited nearly 1 million children around the UK, and education officer Vicki Kelly were obvious candidates to appear in the calendar. The photo shoot in November was a chance for Cycler to pose for Terry O'Neill, who has photographed the biggest stars in showbiz during a glittering career spanning almost 50 years.

Three point challenge success

During the past year, Cycler has been encouraging schools to participate in a three point challenge. The challenge is designed to encourage schools to follow up Cycler's visit with three initiatives that will reduce school waste. The programme has been a great success and as well as establishing the 'fundamentals' such as paper recycling schemes and compost bins, some schools are using their creative powers to come up with innovative ways to cut back waste even further. These include a book swap, recycling reading glasses and a water audit. Well done to everyone who has taken the challenge.

SWAC Support Programme

The SWAC Support Programme provides teaching resources, training and advice to organisations who have taken on the management of the SWACs in their area. Currently SWACs in Bexley, Cheshire, Essex, Lincolnshire and Norfolk are all participating in the scheme.

Norfolk double

Children from Fleggburgh Primary School have been the first to visit a new materials recycling facility (MRF) in Norwich. The facility, which has been open since April 2004, is the most technically advanced MRF in Europe. Visits to the plant and its adjacent landfill site present SWAC Norfolk pupils with an excellent opportunity to see what happens to their recyclables and rubbish after it has been collected.

Pupils from Fleggburgh Primary School on a visit to Norwich's state of the art recycling facility

Bexley summit

SWAC Bexley and Bexley Education Business Partnership hosted an exciting secondary schools' Earth Summit in December. Year 10 students from across Bexley were offered the chance to make a difference by taking part in a range of thought provoking environmental workshops.

Facilitators from LMB Textiles led students from Bexley Grammar School in a recycled fashion show. Unwanted clothes were customised for the show while pupils worked with a choreographer to plan their catwalk routines! Similarly, staff from Bexley Council ran a scrap heap challenge with Cleeve Park School. Students made two moving vehicles from reused office furniture provided by Green-Works.

The Earth Summit will be running again this autumn. For further details contact Sarah Evans or Andrea Cornwell 020 8303 7777 x3605.

Brand new bus

The Essex County Council waste and recycling team will be launching their new waste education vehicle, the Recycling Bus, in February. This state-of-the-art vehicle, featuring the national Recycle Now campaign branding, will be visiting schools and attending public events throughout the county promoting waste minimisation and raising awareness of recycling activities in Essex. The launch will include a photo call for the press and an opportunity to view the vehicle. For further details contact Angela Maxwell angela.maxwell@essexcc.gov.uk

recycle
western riverside

Name change

For those who haven't heard yet Recycle Western Riverside is the new name for the successful inner London campaign, formerly known as Rethink Rubbish Western Riverside. The reason for the change is that the campaign is embracing the new style of the national recycling campaign Recycle Now and continues to build on its success to date, supporting four inner London boroughs in achieving massive increases in recycling rates and awareness. So far, the Recycle Western Riverside campaign has worked with over 80 schools across the region, running waste audits, assemblies and helping them to reduce rubbish and recycle more.

Quick on the draw! Pupils from Wormholt primary school with their environmentally friendly pencils

Wormholt pencils go green!

Wormholt primary school is closing the recycling loop with plans to buy 'green' pencils. Following a successful trial period last December, all junior classes and one year two class at Wormholt have been kitted out with pencil's made from recycled materials. During the trial, Trader Links supplied the pencils which are made from tightly compacted recycled newspaper.

At the end of the trial children were asked to rate the pencil's durability and ease of use. The pencils received widespread approval with 98% of the children rating the pencils as "very good". Consequently, Wormholt School decided to go ahead with their first order of 1104 pencils. Lucy Poole from London Remade worked closely with the supplier to ensure that the price fitted in with the school's budget.

This great piece of green procurement comes in addition to Wormholt primary's other environmental endeavours. The compost bins supplied as part of the Recycle Western Riverside schools program are proving to be very useful too. "All the school's fruit gets recycled after playtime by composting the waste" commented Julie James, the teacher who is leading the school's environmental improvements, "year six collects it each day and soon we will have a lot of nutritious compost for the school's newly re-designed gardens".

Lucy Poole from London Remade is available to provide schools with free one to one advice on purchasing recycled products. Contact 020 7061 6367, lucy@londonremade.com

New banners spread the message

Since last November, newly designed banners are being displayed at all schools participating in Recycle Western Riverside's education programme.
The eye catching banners have special panels which are changed regularly during the term, to provide information updates about the school's environmental progress. The aim of the banners is to increase a sense of ownership over the programme for the whole school, so that students, teachers, cleaning staff, parents and visitors become aware of the school's commitment to reduce, reuse and recycle its rubbish and to buy recycled products.

Streetwise Kermit

To coincide with the electric theme of this issue of Wasted we thought it only fitting to mention our beloved Kermit, who is now celebrating a second birthday. Kermit's daily routine often includes taking our education officers and their highly prized teaching materials quietly across town without a hint of CO_2 being emitted. How? Kermit is the nickname for our bright green Citroen Berlingo electric van.
Kermit was purchased for the Recycle Western Riverside campaign at the end of 2002 with the help of a grant from the Energy Saving Trust. It means that Recycle Western Riverside can get around schools in the four London boroughs it works in, without any impact on the local environment. Furthermore, recharging the vehicle's batteries at the Waste Watch office uses electricity generated from renewable energy, making Kermit the ultimate green machine!

Education officer Melanie Chew, behind the wheel of her electric van, nicknamed Kermit

TEACHERS' RESOURCE instant expert

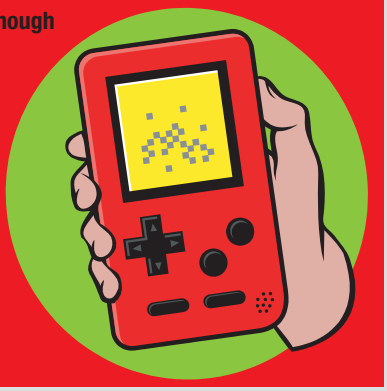
A whirlwind tour of issues relating to electrical waste

The figures

- every year an estimated 1 million tonnes of waste electronic and electrical equipment (WEEE) are discarded by householders and businesses in the UK
- in the last 12 months 2 million working Pentium PCs were buried in landfill sites
- an estimated 2 million television sets are discarded each year
- 2.5 million domestic fridges are replaced in the UK every year
- electronic and electrical equipment makes up on average 4% of European municipal waste
- an average TV contains 6% metal and 50% glass
- about 100,000 tonnes of glass from computer and TV screens was scrapped last year, most ending up in landfill sites
- research suggests that there are over 20 million, potentially toxic, redundant mobile phones in the UK

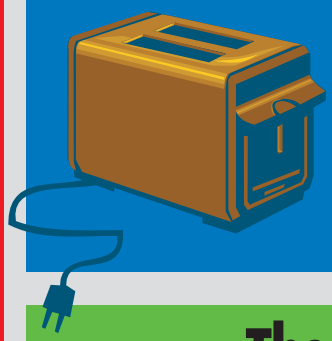
The issues

- This problem affects us all. WEEE (don't laugh!) is made up of TVs, telephones, circuit boards, computers, printer cartridges, toys, games and every conceivable piece of electronic or electrical equipment we use. However, the main component, making up 43% of WEEE, is large household appliances like fridges and cookers known collectively as 'white goods'.
- When obsolete materials are not recycled we lose the resources used to make them. With electrical goods this can mean losing valuable metals such as copper and steel. We also have to extract these materials again to make new goods which involves wasting more energy and resources, not least on transport. This means more pollution, more environmental damage, and more climate change.
- The materials used in electrical equipment often contain highly toxic substances that could poison us and destroy wildlife if they are disposed of irresponsibly. For example, fluorescent tubes contain toxic heavy metals such as mercury, cadmium and lead. All of which can cause damage to the liver, kidneys and brain if they enter the body. One four-foot fluorescent tube contains enough mercury to poison 10,000 litres of water.



The politics

- Two EU directives have passed into British law and will affect the way we dispose of electrical waste: The Waste Electrical and Electronic Equipment (WEEE) Directive and the Restriction on Hazardous Substances Directive (RoHS). Similarly, the Directive on Ozone Depleting Substances controls the way we dispose of fridges and freezers.
- The WEEE directive states that by August 2005 manufacturers must have collection or take back schemes which allow the public to return waste electrical items free-of-charge.
- By 31 December 2006 the UK will have to collect 4kg of electronic waste per person per year.
- The WEEE directive establishes the concept of 'producer responsibility' meaning that manufacturers will have to make it easy for consumers to return unwanted goods for recycling when purchasing a replacement.



The solutions

- Only buy goods from manufacturers with a good environmental record and who are offering to repair items or take them back for recycling at the end of their life.
- If an appliance has stopped working then try to get it repaired.
- When you are buying an item, why don't you save some money by purchasing a secondhand or refurbished item? Secondhand goods can be purchased easily from classified adverts or from auction websites like ebay.
- The WEEE and RoHS directives should lead to a reduction in air pollution, including CO_2 and ozone depleting substances, and water toxicity by more than 50% when compared to existing practice.
- Use rechargeable batteries.
- Think about alternative sources of electricity like solar and windpower.

Take action

- There are many organisations willing to dispose of your old computers, VDUs, printers and all other IT hardware as well as tapes, floppy disks, CDs and DVDs. For more details visit www.wasteonline.org.uk
- In some areas there are projects which take household furniture and basic electrical equipment such as cookers and fridges to pass on to low-income households. For further details contact www.frn.org.uk
- Rather than put unusable small appliances in the bin, take them to your local civic amenity site where they can be added to other scrap for recycling. If you have bulky items to be discarded, contact your council to arrange collection.

Make your own battery

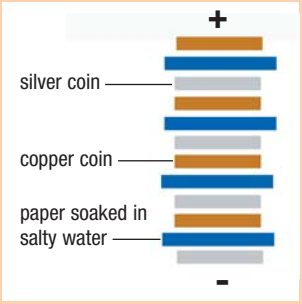
Batteries are a useful way of storing electricity so that electricity is available to us wherever we go. Batteries come in many shapes and sizes, depending on how we want to use them. For example, a watch battery needs to be small and light enough to fit inside a wrist watch. But whatever the size and shape of a battery, they all work in the same way.

How batteries work

The scientific name for a battery is a cell. They contain chemicals in the form of a paste which is wrapped up in metal. When the chemicals mix together they make electricity which flows as a current from the negative (-) end to the positive (+) end to power your toys, torches and mobile phones.

You should never try to open a battery because the chemicals and metals inside are poisonous. When batteries get thrown away into landfill sites the chemicals eventually leak out and can poison rivers, plants and animals. But you can make a battery without dangerous chemicals.

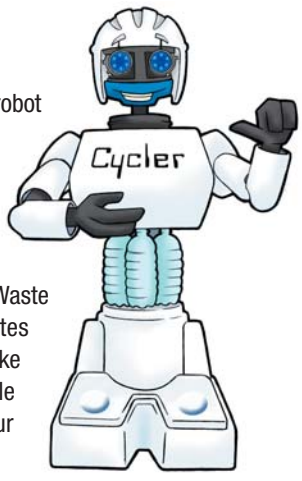
The first battery



The first battery was made 300 years ago by an Italian called Allessandro Volta. He piled copper and silver coins on top of each other with a layer of cardboard soaked in salty water in between. To make the current flow he needed to complete the circuit using a piece of copper wire to join the bottom of the pile to the top. The current moves from the negative end to the positive end just like in modern batteries. He called it a Voltaic cell.

Try making one yourself using 2p and 10p coins. There should be a different coin at the top and bottom of the pile (as in the diagram) with as many layers in between as you like. The bigger the battery the more electricity it makes. But there are problems with the Voltaic cell because the soggy cardboard dries up quickly and the battery goes flat.

Robot recharge



Did you know that Cycler the rapping robot is powered by wind?

Following a busy day visiting schools around the country, Cycler the rapping robot is plugged into the mains socket to recharge his batteries. Waste Watch's electricity supplier generates electricity from renewable sources like wind power. Do you use rechargeable batteries like Cycler? Where does your electricity come from?

Using a voltmeter we measured our lemon generating a whopping four volts

Fruit battery

There are many amazing things you can use to make a battery, even a piece of fruit!

You will need

citrus fruit
piece of copper (eg a copper coin) about 5cm long
piece of zinc (an ordinary galvanised screw) about 5cm long
LED light or voltmeter with leads

What to do

1. Roll the fruit under the palm of your hand to soften the fruit, but be careful you don't break the skin.
2. Push the copper and zinc into the fruit about 5cm apart. Don't allow the metal to go all the way through the fruit.
3. Attach one end of the lead to the copper with a clip, and the other end to the zinc.
4. If the circuit is complete, the LED should light up.

What happens?

The juice in the lemon contains acids that act in the same way as the chemicals in a regular battery.

You can make the battery more powerful by joining several fruit batteries together with leads, just in the same way that torches sometimes use several batteries together to increase the flow of current. You can measure the amount of electrical current you make using a voltmeter.

Try different fruit and vegetables to find out which fruit make the most electricity.

Do not eat the fruit when you have finished. Put it in your compost bin.

The activities on this page link to national curriculum areas such as science for key stage 1 & 2, unit 2F using electricity.

Eco-design for Chirpy Computers Ltd

Chirpy Computers Ltd makes personal computers for home use. The company's management have asked you to research a radical new product called the Chirp-e 3000. It will be the most environmentally friendly computer available.

Working in groups, investigate alternative ways of producing your computer, addressing each of the areas detailed below so that the new computer is as 'green' as possible.

Other sources of information you may wish to consult are computer company catalogues and websites, and environmental information such as www.wasteonline.org.uk

Planned obsolescence

Planned obsolescence is when a product is designed not to last for a long time. The reasoning is that it will then need to be replaced, creating demand for new products, and more profits for the manufacturer. Unfortunately, until now Chirpy Computers have been producing computers with planned obsolescence by

- installing software on their computers that is difficult to upgrade
- not offering spare parts or service options that enable old computers to be repaired
- using hardware that is difficult to upgrade with the latest components

What's the problem? Planned obsolescence uses up natural resources and causes waste.

As computers are upgraded can you find ways of ensuring the old hardware doesn't just get thrown away?

Find a solution. In what ways can you make sure that the Chirp-e 3000 computer avoids becoming obsolete?

Packaging & shipping

Packaging is important to protect the product during transportation. Until now Chirpy Computers Ltd have been packaging their computers in polythene bags surrounded by polystyrene, all of which comes in a box made from a layer of cardboard glued to a layer of plastic. Cables, discs and manuals come separately packed inside polythene and foil bags. This is then shipped from factories in the Far East to the UK.

What's the problem? The packaging materials currently being used cannot be reused, easily separated, or recycled, and the packaging is not made from recycled material. Furthermore, the boxes are made from a layer of plastic glued to card. Multi-material packaging such as this is very difficult to separate into its component parts for recycling. On top of this, very few people have access to a polystyrene recycling facility.

Find a solution. If your new computer is going to be the most environmentally friendly computer available you will need to find less wasteful ways of packaging and shipping your product.

- Find out which packaging materials can be easily recycled and how they should be labelled.
- Look at packaging design and consider multi packs rather than individually wrapped. Can the packaging be reused?
- Are all the freebies and software available with computers really necessary?
- Investigate where the products are made, is it possible for them to be manufactured closer to the UK and therefore decrease the environmental impact of transportation?

Toxic materials

The manufacturing of computer's and their component parts typically involves many hazardous substances, including

- lead and cadmium in computer circuit boards
- lead oxide and barium in computer monitors' cathode ray tubes
- mercury in switches and flat screens
- brominated flame retardants on printed circuit boards, cables and plastic casing

What's the problem? Many of the chemicals used in computers are toxic. Furthermore, at the end of the computer's life the components are difficult to dismantle and dispose of.

Find a solution. If Chirpy Computers Ltd is going to be more environmentally friendly than its competitors then it will need to come up with ways to lessen the impact of the toxic chemicals used to make its computers.

- Investigate options for removable, rechargeable and recyclable batteries. Are companies publicising these options?
- Who has responsibility for disposing of the computer safely at the end of its life, the company or the consumer? Find out more about take back schemes.
- How can components be designed or labelled to allow them to be recycled more easily?

Other design and manufacturing factors

Consider other areas that Chirpy Computer Ltd. will need to address

Find a solution

- What materials should be used to manufacture the computer? Could metal casing be used rather than plastic? Which is more environmentally friendly?
- Is it possible to use any other recycled materials in manufacture?
- How could the factory use less water, paper and electricity?

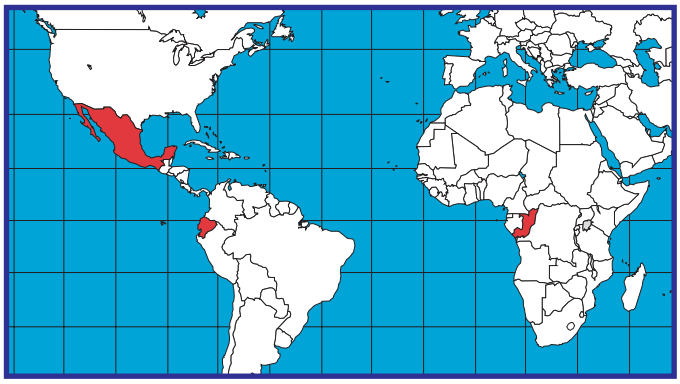
Now, give a presentation on your ideas for the new, environmentally friendly, Chirp-e 3000 computer.

This activity could be used in a design and technology class incorporating ICT.

TEACHERS' RESOURCE world view

Focus on mobile phones

The mobile phone is one of the technological innovations of our generation. But alongside the obvious benefits the mobile phone brings us, there are also costs. Follow us on a trip around the world to look at some of the effects of the production of mobile phones.



It is estimated that about 45 million people use a mobile phone in the UK, around 75% of the population. World wide there are 1.25 billion mobile phone users and this number is steadily rising. As new phones come onto the market, or as old phones are broken, people replace their mobiles. However, at the moment these old phones are seldom recycled. For example, in Europe 58 million replacement mobiles are bought each year, with approximately 85 million unused phones lying around in people's homes. Millions of these old phones could be recycled, although it is estimated that fewer than 5% are.

To comply with the Waste Electrical and Electronic Equipment (WEEE) directive, mobile phone manufacturers will have to ensure that all mobile phones are recycled by August 2005.

The mobile phone is made up of valuable materials from all over the world. If we don't recycle our phones then these materials are lost, and the costly process of extracting and refining new materials must continue over and over again.

Plastics
A mobile phone is largely made from plastic, which in turn is made from oil. So to start our journey we could go to any oil producing country such as Saudi Arabia, Russia, Angola, Ecuador, USA or Norway to name but a few. Let's start in Ecuador.

In the Ecuadorian rainforest the oil industry is working hard to produce as much oil as possible. This is not without environmental consequence. The oil industry has a history of oil spills in the area. Activists estimate that in the last 30 years more oil has been leaked into the ground in Ecuador than was spilt by the oil tanker Exxon Valdez which was wrecked off the coast of Alaska in 1989.

Metals and minerals
In addition to plastic the mobile also contains a number of different metals, some of which are among the most dangerous known to man including cadmium, rhodium, palladium, beryllium and lead. These metals need to be disposed of safely.

Democratic Republic of Congo
One key component of mobile phones is a capacitor which contains the mineral coltan. The largest deposits of coltan are found in Australia and the Democratic Republic of Congo (DRC). The DRC is currently ravaged by a three year civil war which has cost over 10,000 lives and displaced a further 200,000 people. The United Nations, Human Rights Watch and the World Conservation Union say fighters are selling coltan to help fund the war. On top of the human suffering wildlife is also at risk. Endangered species in the area such as the gorilla, are beyond protection and are being hunted for food.

Mexico
After all the components have been brought together the phones are assembled in large mobile phone factories like the ones found in Mexico. The charity Save the Children dispute the working conditions for mobile phone factory workers in Mexico saying that companies are taking advantage of suspended labour laws designed to attract foreign investment. It claims that workers are paid poorly and forced to put up with bad working conditions.

Discuss these issues with your class.
Can you think of any ways to make mobile phones more sustainable? What should you do with old mobile phones?

Sources
www.mobiletakeback.co.uk
Eurosource Europe, Nov 2004
BBC News; www.bbc.co.uk/nature/animals/features/186index.shtml

This resource can dovetail into any **geography** and **citizenship** classes.

TEACHERS' RESOURCE useful resources

All the information you need is out there on the internet – somewhere! We tell you where to look.

Waste Online

This website should be top of your list to visit if you need information on any aspect of waste or recycling. There are terrific factsheets that tell you everything you need to know on a wide variety of topics. The information on electronic and electrical waste is particularly good.

www.wasteonline.org.uk

Reuze

Reuze is a great source of information and contacts across the recycling sector. It provides information on recycling, lists of organisations providing recycling services, and a selection of products made from recycled materials. The materials and products listed include toners, batteries and CDs. There is also a set of information posters that you can download, providing information on where you can recycle items like mobile phones, sunglasses and paint.

www.reuze.co.uk

Envocare

This site covers topics about the natural environment, recycling and hazardous waste as well as energy and human resources, composting and environmental issues. There is comprehensive information on the recycling of electrical goods, including mobile phones and fridges, and there are good links to recycling companies. There is even a section where you can send electronic greetings cards to your friends, and lots of great pictures to use as computer wallpaper.

www.envocare.co.uk

Sustainable Design Award

The sustainable design award is a freely available scheme for teachers and students, intended to bring issues of sustainability into design and technology classes. There's lots of information on the website to inspire the designers of tomorrow and ideas for conveying the wider issues of sustainability to kids.

www.sda-uk.org

Wesp Network

Our Waste Education Support Programme is launching an online forum in Spring 2005.
Watch this space!

www.wastewatch.org.uk/education

How Stuff Works

This is another American site so be prepared for adverts and pop-ups. However, once you are past these there's an impressive store of information explaining how things work, including electrical equipment such as batteries, DVD players, semi-conductors, electric motors, circuit breakers, computer hardware, GPS, and radar. Great background reading for budding designers, scientists and engineers.

www.science.howstuffworks.com

Recylezone

Happy 1st birthday to Recyclezone! This Waste Watch website specially for children and teachers is now one year old, and is packed with games, quizzes and information on waste and how to cut it. Websites like Recyclezone show the power of the web to present information without the need for paper magazines and newsletters that need to be recycled after being read.

www.recyclezone.org.uk

Science Year

This site, run by NESTA, is geared towards children and adults covering science activities that link in with the national curriculum. Activities include sound, cocoa craters, exploding volcanoes as well as electricity in the home, energy resources, flight etc. There are lots of fun science activities that will appeal to all ages. Science Year are currently developing activities for under 11s.

www.scienceyear.com

Green Consumer Guide

This site gives up to date news on green consumer issues and the latest environmental news from the political arena. You can find information on energy efficient products including IT equipment, audio appliances, fridges and washing machines. They even have a link to a solar powered PA sound system for outdoor festivals (backup is provided by bicycle generators).

www.greenconsumerguide.com

It's out there on the internet – Fridgehenge

One worrying piece of environmental news over the last few years was the appearance of so-called 'fridge mountains' following tighter disposal regulations introduced to protect the ozone layer from harmful substances found in old fridges. However, it seems that several people around the world have been making their own fridge mountains in the name of art.

The idea started in 1994 in Hamilton, New Zealand when three locals decided to celebrate the summer solstice by constructing a miniature version of Stonehenge from old fridges. 'Fridgehenge' was an instant crowd pleaser and the idea soon spread.

A larger version of Fridgehenge was then constructed by US artist, anthropologist and filmmaker Adam Horowitz near Santa Fe as "a monument to consumerism and the hubris of man". While the original Stonehenge is orientated towards the summer solstice sunrise, the US Fridgehenge is orientated towards the Los Alamos laboratory which the artist describes as the "atomic solstice".

Stonehenge has also inspired another monument made from scrap materials. Carhenge is made entirely from old automobiles with a Cadillac taking pride of place in the altar stone's position.

www.etete.com/torrie/Fridgehenge.html
www.blueyonder.co.uk/blueyonder/getContent.jspx?page=642872&group=tv_page
www.worldofkitsch.com/features/seven_wonders/carhenge.html

WESPlife

The Waste Education Support Programme (WESP) was set up in response to the growing number of requests that Waste Watch was receiving for help running waste education projects.
As a result, WESP was designed to provide organisations with an 'off the shelf' set of waste education training & resources to use in schools in their area.

The Waste Education Support Programme (WESP) completed the last training session for the second intake of delegates in September 2004. All delegates left armed with information and resources to roll out in schools in their area. The focus of the training session was working with secondary schools and implementing action in school on the 3Rs. Below are details of all the organisations which have taken part in the WESP training.

WESP intake 1

Barnsley MBC	Gail Hunt	01226 772 214
Buckinghamshire CC	Claire Baldry	01296 387 1951
Chiltern DC	Rebecca Newbutt	01494 732 281
Devon CC	Lindsay Coyle	01392 382 920
Doncaster Community Recycling Partnership	Phil Kimber	01302 849 068
Doncaster MBC	Maggie Count	01709 863 196
Gateshead Council	Heather Tarvit	0191 433 7418
Gloucestershire CC	Susan Kinsey	01452 426 601
Lancashire Wildlife Trust	Andy France	01772 752 930
LB of Brent	Marlene Taylor	020 8937 5292
LB of Bromley	Amy Bevins	020 8313 4989
LB of Enfield	Nick Martin	020 8379 2214
LB of Lewisham	Beth Snowden	020 8314 2053
Shropshire CC	Sue Jellyman	01743 253 064
South Moulton DC	Cathy Karniewicz	01271 345 806
Telford and Wrekin Council	Sue Levers	01952 202 951
Westminster CC	Gerry O'Connell	020 7641 7956
Wycombe DC	Vicki Pattison	01494 421 440

WESP intake 2

Aberdeenshire Council		0845 600 3900
Biffa Waste Services	Liz Fenlon	01494 521 221
East Renfrewshire Council	Erica Kemmet	0141 577 3032
Hartlepool BC	Clare Belcher	01429 523 829
Isle of Man Government	Stephanie Gray	01624 686 534
LB of Merton	Stephanie Catz	020 8274 4901
Oswestry BC	Lynn Strachan	01691 677 281
Swindon BC	Andrew Cook	01793 464 536
Thurrock BC	John Ronan	01375 652 910
Warwick DC	Heather Parkinson	01926 456 615

WESP participants puzzle over the compost timeline, one of many WESP teaching resources that bring waste and recycling to life

WESP offers new services

A new look WESP is about to spring into action to ensure that Waste Watch can continue to offer comprehensive support to local authorities and other organisations interested in waste education. The new WESP has been developed to offer a complete service divided into four strands

- the network – a national forum for waste educators
- the gateway – web based resources and information
- waste education training
- tried and tested teaching resources

The network is a national forum, sharing experience, best practice and ideas between waste education practitioners. The network is a centrally coordinated service bringing together organisations nationwide and collating and providing information to its members. Information and ideas will be disseminated through

- an annual network meeting and training event
- exclusive web services including waste education discussion boards
- regional development meetings
- helpline
- update bulletins
- welcome pack

The gateway is an easy to use, web based service containing contact details of local projects, resources and services. It will provide a central point for organisations to advertise their services and resources to schools and the general public. Waste Watch has secured funding from Yell to develop the gateway which will hold information on

- waste education practitioners
- waste education resources
- reuse and recycling services

WESP training provides practitioners with the resources and knowledge to deliver practical waste education in schools and the community. It will cover issues from how to get schools involved and understanding the national curriculum, to implementing school based community projects.

WESP teaching resources are a series of integrated activities and waste education games designed to aid delivery of waste education. The resources provide a fun and exciting way to deliver messages by engaging pupils and community groups in discovering waste reduction and resource use.

The new WESP services will be available from April 2005.

for more information on WESP contact Emma Appleton, education projects coordinator, 020 7549 0300, emmaa@wastewatch.org.uk

Waste Watch Education Projects

Regional projects

SWAC North Yorkshire
Irene Wise & Nick Lishman
01609 761 818
irene@wastewatch.org.uk
nicklishman@wastewatch.org.uk

SWAC Nottinghamshire
Edwina Woodland 0115 977 2467
edwina@wastewatch.org.uk

Ashfield DC, Bassetlaw DC, Broxtowe BC, Gedling BC, Mansfield DC, Newark & Sherwood DC, Rushcliffe BC

Recycle Western Riverside
Marina Littek & Melanie Chew
020 7549 0333/0335
marina@wastewatch.org.uk
mel@wastewatch.org.uk

London Boroughs of Wandsworth, Lambeth, Hammersmith & Fulham and the Royal Borough of Kensington and Chelsea.

National projects

Recyclerbility
www.wastewatch.org.uk

supported by

To book a visit from Cycler the rapping robot, please complete the form on the education page of the Waste Watch website. Please bear in mind this is a very popular national project and there is a six month waiting list.

WESP
Emma Appleton 020 7549 0315
emmaa@wastewatch.org.uk

SWAC support projects

SWAC Bexley
Sarah Evans 020 8303 7777 Ext 3605
sarah.evans@bexley.gov.uk

SWAC Cheshire
Janet Sampson 01244 603 574
janet.sampson@cheshire.gov.uk

There is currently no SWAC education officer in post at present.

SWAC Essex
Cat Auckland 01245 437 169
catherine.auckland@essexcc.gov.uk

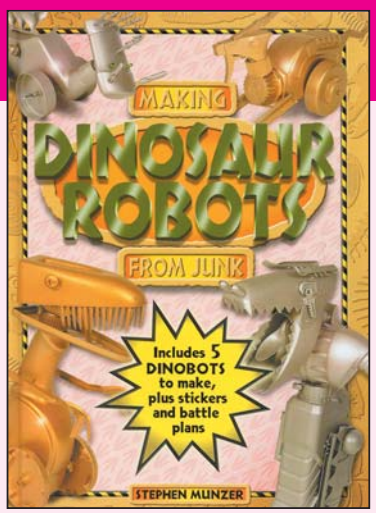
SWAC Lincolnshire
Helen Percy 01522 552 398
helen.percy@lincolnshire.gov.uk

SWAC Norfolk
Martina Glason & Jenny Craven
01603 223 835 / 829
martina.glason@norfolk.gov.uk
jenny.craven@norfolkgov.uk

Breckland DC, Great Yarmouth BC, North Norfolk DC, Norwich City Council, South Norfolk DC, West Norfolk & Kings Lynn BC, Broadland DC

TEACHERS' RESOURCES

Dinosaur Robots from Junk



Every issue we review an education resource that teachers can use in the classroom. Here we take a look at Making Dinosaurs from Junk by Stephen Munzer.

This book contains some ambitious craft projects detailing how to build model dinosaurs from waste.

The format

This book gives easy to follow instructions on how to make five dinosaur robots from unwanted household junk. 'T-Wrecks', 'Terror Saw', 'Cyber-Ceratops', 'Brontobot' and 'Ballistasaurus' can be made from plastic bottles, coat hangers, old CDs, lids, clothes pegs, air fresheners and plastic bags as well as many other bits and pieces. The book has full lists of all parts and tools needed plus step by step instructions on how to assemble each robot. There are some good 'top tips' to help you along the way. Once the robots have been made there are ideas for decorating them and two pages of stickers are provided to choose from.

The section entitled Battle Bank will be a favourite for fans of the BBC programmes Robot Wars and Techno Games. Here, ideas are given for pitching robots against each other to see which one emerges as the supreme 'Dinobot Warrior'. We are also given details of four tough challenges to set each of your robots. You can make your own arena and keep scores on a special score sheet. For those who are confident in going further you can bring your dinobot to life with a motor, lights or buzzers, as well as making a remote control.

Due to the advanced nature of some of the model making, adult help is essential for most of the projects detailed in the book. However, hazards are listed in each section and there is good safety advice.

A basic glossary and some links to other robot websites are included at the end of the book.

The audience

This is definitely a book for upper key stage 2. Technically the processes are quite difficult and require a lot of time and preparation. You would have to simplify the projects significantly for key stage 1 or lower key stage 2.

Curriculum links

The activities in the book have great potential for cross-curricular links. The process of sorting out junk to use for the robots will link in with QCA science unit 3A: characteristics of materials. Links to environmental work, art and design, and technology are also strong.

Making Dinosaur Robots From Junk is published by Chicken House and is available to buy from www.thebookpeople.co.uk

Dates for your diary

1-13 March

Fair Trade Week comes around once again with two weeks of events to promote fair trade products that pay a fair price to the producer. Be sure to hunt out the fair trade logo on products, and sleep with a clear conscience as a result. **www.fair-trade.org.uk**

6 March

Mother's day is a our chance to make up for all the headaches we've given our parents over the years! What better way to do this than to send a card made from recycled materials? That way, we can show we care for mother earth too!

22 March

A national forum for waste educators is launched this morning at the Princess Diana memorial trust buildings in London. Attendees have been invited to schmooze with parliamentarians afterwards! **www.wastewatch.org.uk/education.**

22 March

Waste Watch education campaign briefing event at the House of Commons. This exclusive get together is our big chance to tell powerful people what a good job waste educators are doing for the environment **www.wastewatch.org.uk/education.**

12 April

The RSA unveil the **WEEE man** at Potter's Fields near Tower Bridge in London. This impressive structure will be made from the electrical waste that one person can expect to use in a lifetime. It is hoped that the WEEE man will inspire the public, retailers and manufacturers to think twice about waste. The WEEE man will be on display for four weeks. **www.rsa.org.uk**

18-19 May

The Community Recycling Network is holding its annual conference in Coventry. This event is a great chance for grass roots organisations to get together and share ideas about cutting waste to the max! **www.crn.org.uk**

waste WATCH .org.uk