

Waste & Recycling

According to the UN, in his or her lifetime a child born in a developed country will consume as much as 30 – 50 children living in a developing country.

Waste production globally

Transport and the recycling processes involved in waste management produce greenhouse gases and other forms of pollution; this is in addition to the waste involved in producing the product. With consumption of products so high globally, the choices we make as consumers have never been more important. Not all countries produce equal quantities of waste, but there is a general correlation between a country's wealth and the amount of waste its citizens produce which is exacerbated by an economic system which focuses on growth and consumption. Planned obsolescence, where items are designed to become out of date and / or non-functional in a defined time frame, is an increasing problem, particularly in technical products such as mobile phones and computers. For this to be part of the design and production strategy is something previous generations would have found outrageous.

The role of advertising

Around nine times as much is spent today on advertising compared with the 1950s, driving the global appetite for goods and services. Over this same period expenditure on consumer goods and services increased four-fold, taking into account inflation. Our lives are dominated by advertising – advertisements take up to two-thirds of newspapers, a third of all TV programming, and half of all mail. Advertising is generally used to encourage us to buy more, but it can be an effective tool in encouraging behaviour change such as using seat belts in cars, recycling and stop smoking campaigns.

Marginal communities

For many, waste collection is a public service paid for by local taxes, but a significant number of people do not receive this service. For example in Dar es Salaam only 25% of waste is collected and in Karachi only 40%. For some

waste collection is a means of income: the World Bank has estimated that up to 2% of the population in the developing world survive by recovering materials from waste. Informal waste collection systems have many environmental and social justice implications. On the positive side, it reduces the need for land-fill and provides a source of income for some of the world's poorest people. In Brazil 100,000 people earn their living by collecting aluminium drinks cans, which enabled a record level of recycling of almost 90% - the highest in the world. However, informal scavenging comes at a high cost to those undertaking it. The workers have poor health and living conditions, no protective clothing or even proper shoes and are often exploited by waste buyers. In Mexico waste scavengers have a life expectancy of 35 years, as opposed to 67 years of the general population. According to the UN Environment Programme, 90% of waste exported in 2000 was classified as hazardous and up to 75% of electronic waste shipped to Africa for re-use is unusable and is dumped or burned.

Bag for life?

The average plastic bag takes one second to manufacture, is in use for 20 minutes and takes over 100 years to degrade naturally. Four - five trillion plastic bags are currently produced globally each year not only do they add to waste in landfill, but they have also been blamed for flooding where they clog up the drainage systems and for killing cattle, birds and other animals which mistake them for food. Such concerns led to Bangladesh banning plastic bags altogether in 2002. Since 2008 non-biodegradable polythene bags have been illegal in Rwanda and some believe it could become the world's first plastic-free nation. In the UK, Modbury became the first town to ban the plastic bag in Britain in 2007. Plastic bags are not the only 'single use' plastics in our throw-away society - water bottles, cups at the water cooler, lunch boxes and many more items also mean throwing away vital resources.

Is zero waste achievable?

In developing waste management strategies most governments use the waste hierarchy. This prioritises waste reduction and prevention, and focuses on re-use through recycling, composting and energy recovery (incineration), followed by landfill as the final option. This is neatly summed up by the 4 Rs phrase: **Reduce, Re-use, Recycle, Repair** (to which some people have added **Refuse** meaning use your own bag, lunchbox etc). Although a laudable policy it remains an aspiration for most countries and the focus remains on recycling. Even Norway, seen as good at this, citizens generated an average 354kg of waste last year. To tackle waste minimisation, emphasis must be on changing manufacturing processes and reducing consumption. Improved technology plays a part, for example drinks cans are much lighter now and use far fewer resources to make – a process called ‘light-weighting’. However this advance is off-set by far higher demand with 200bn beverage containers sold every year in the USA alone - over 500m bottles and cans every day! Two thirds of this material is incinerated or goes to landfill.

E-waste: digital dumping and toxic trade

The electronic era has revolutionised the way we think, work and communicate. Digital devices are now fundamental to the functioning of every day life at work and at home and this has a significant impact on the waste we produce as a society. E-waste is one of the fastest growing areas of waste according to Greenpeace - it currently stands at 5% of all municipal waste, nearly the same as plastic, but much more hazardous. Electronic products discarded globally have rocketed with 20-50 million tonnes of waste generated every year.

Although the West generates more e-waste, this often ends up in the global south as it is often cheaper to dump hazardous waste in this way rather than dispose of it properly. This causes problems in places where the waste is dumped and the situation is escalating inevitably, as people are continually upgrading their mobile phones, computers, televisions and other devices. Mobile phones and computers cause the biggest problem because they are

replaced most often. In Europe e-waste is increasing at three to five percent a year, almost three times faster than the total waste stream. Developing countries are expected to triple their e-waste over the next five years.

Producer responsibility

A significant amount of waste could be avoided if all manufacturers factored in environmental considerations at the design phase of products. Extended producer responsibility laws exist, which commit companies to take back, re-use and re-cycling products at the end of their useful life. In many countries this legislation exists particularly to control waste from electronic and electrical equipment, cars, tyres, batteries, office equipment and construction materials. Packaging, which has grown significantly over the last 30 years, and is, by definition, waste as soon as it is used, is complicated by the fact that it is a highly mixed waste stream. Average UK consumption results in a packaging waste stream that is 33% plastic, 32% glass, 19% paper and card and 14% metals. Many companies pay to transfer their obligations to third party companies, revealing a major weakness with the system. Some waste management companies use illegal methods to dispose of waste, including fly-tipping, shipping to places with less stringent legal obligations and dumping at sea.

Costing externalities

A growing international movement is calling for the factoring in of negative environmental impacts compared to the cost of an item. When applied to plastic bags this means charging people for every bag they use and is termed ‘costing externalities’. The Irish Republic has levied a charge on plastic bags since 2002, a policy that reduced usage by 95%. Similar schemes have been introduced in parts of the UK, leading to a fall in usage of disposable bags and the coining of the phrase ‘bag for life’.

A really ‘SMART’ Phone – the Fairphone

One bright spot is the first ethically made mobile phone with consideration of the sourcing of materials, fair wages and a well-thought through e-waste programme which has been developed in Holland and is now on sale.



Learning in a global context

Children are entitled to learn in a global context. They encounter world views from their families, cultures and communities. A school curriculum, set in a global context, deepens their understanding and engagement with the complexities of that world. Teaching about **Waste and Re-cycling** requires teachers to be familiar with global issues that affect all our lives and to impart knowledge, skills and values that will equip children to live and be active in an interdependent, globalised world.

Real, relevant, current issues

Action on **Waste and Re-cycling** is essential if human kind is to find a sustainable future within the planet's resources and in tune with earth's well-being. The aim of sustainable living for all requires new ways of thinking, acting and living from us all. Adverts tell us buying products can fulfil our deepest needs, whilst hiding conditions in which products are made or environmental consequences of endless consumption and waste. Understanding issues of waste and re-cycling gives purpose to work across the curriculum, with rich data and real-life scenarios around sustainable development and current issues. It opens debate around alternative ways of tackling extreme poverty, inequality and differing perspectives on poverty and wealth.

Social justice, not charity

Fundraising campaigns that aim to evoke sympathy may instil feelings of guilt, with limited educational value. Encouraging children to research and question global issues helps them understand that there are more effective ways for governments and people to achieve a more sustainable and equitable world than charity.

Broaden perceptions, counter stereotypes

No country is uniformly rich or poor: inequality exists within, as well as between countries, including the UK. There is much to be learnt from others, whatever their situation. Media coverage of people and places may reinforce common stereotypes. Adverts and images can imply dependency and uniform poverty in southern countries, especially in the diverse continent of Africa.

Thinking critically about Waste and Re-cycling

'I buy, therefore I am' could be the slogan of our times. Reducing consumption and waste production – the first and most important of the 3 Rs 'Reduce, Re-use, Recycle', is complex.

- ~ It may affect the economy and reduce jobs.
- ~ It may lead people to seek more fulfilling relationships and communities and gain satisfaction from non-material aspects of life.
- ~ It may cause diminished natural resources and leave us to suffer the consequences of unsustainable choices.

There are no easy answers.

With this in mind, consider these questions:

Self-reflective questions:

Focus - what do I think about this?

Why do I think like that? To what extent am I open to changing my point of view?

- ~ How do you define your priorities for consumption?
- ~ What most influences your wants and needs?
- ~ What part does consumerism play in your understanding of who you are as a person?
- ~ Is success defined by the goods and services a person can afford?

Group Dialogue questions:

Focus - what do other people think about this?

How can I find different perspectives?

Analyse assumptions, implications and contradictions? And how can I engage with complexity, conflict, uncertainty and difference?

Discuss these questions with others:

- ~ How much of what we consume is influenced by advertising and businesses fuelling this?
- ~ How would you define over-consumption?
- ~ What is a necessity and what is a luxury?
- ~ What are the effects of this production process on the environment, society and individuals?
- ~ How do material values influence our relationships with other people? What impact does that have on our personal values?
- ~ How do consumption habits change as societies change?
- ~ What influences how and why things are produced? In whose interest is this?

Curriculum planning

Literacy, Language and Communication

Pupils:

- ~ debate the issue of waste and how the world's richest people produce the most waste, giving well-structured descriptions and explanations for different purposes, including expressing feelings;
- ~ read fiction books to discuss issues of waste and the environment, e.g. The Paper bag Prince;
- ~ investigate the language of advertising that tells us to buy products yet hides the conditions under which they are made and the environmental impact.

Knowledge and Understanding of the World

Pupils:

- ~ use maps, atlases, globes and digital/ computer mapping to locate places and describe the features studied, for example, the countries and regions where waste is most produced and most dumped, or where plastic bags are banned e.g. Bangladesh or Rwanda;
- ~ learn about people who make a living from waste, including those needing to scavenge;
- ~ look at the ways in which previous generation consumed and wasted far less than today and why our attitudes have changed.

Physical

Pupils consider their physical surroundings and ways in which it can be improved, both inside school and in the local area; they share their ideas with decision makers, making reference to reducing waste.

Creative

- ~ Pupils investigate musical instruments made from recycled materials and design and make their own;
- ~ Linking to the expressive arts, pupils develop their own imaginative and creative ways of expressing some of their own commitments to the environment, helping others locally, nationally and globally.

Personal, Social, Health, Citizenship and Economic Education

- ~ Pupils learn about the wider world and the interdependence of communities within it. They learn that throwing things away never means they disappear;
- ~ They begin to understand that their own choices and behaviour can affect local, national or global issues;
- ~ They learn how to make more confident and informed choices about their health and environment; to take more responsibility, individually and as part of a greater whole.

Mathematical, Scientific and Technical

Pupils:

- ~ use maths across the curriculum to investigate waste, e.g. time problems on a plastic bag theme: 1 second to make, 20 minutes to use, over 100 years to degrade – they work out equivalents in other units of measurement;
- ~ explore examples of human impact (positive and negative) on environments, for example, the negative effects of waste, litter and landfill;
- ~ investigate and design their own bags from recycled materials to replace plastic bags

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