

Sustainable development

A few years ago all of the United Nations countries held an environmental meeting in Rio de Janeiro, Brazil. There was an agreement, called "Local Agenda 21", that means all countries will try to manage their environment better. The countries decided to educate their people to work for "Sustainable Development." This means not only taking care of the environment, but also making sure none of their technology stores up problems for future generations

Air that you can't breath without getting ill, water that fish can't live in, land so poisoned from industrial use that you can't safely build houses on it – it has to stop!

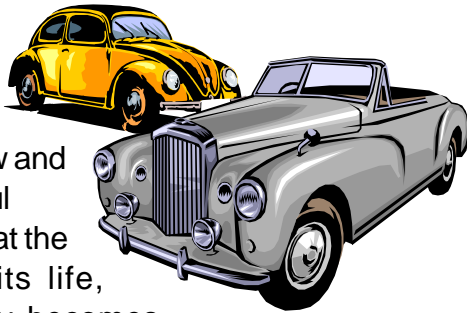
We cannot go on treating the environment as a dustbin, because the bin is nearly full. Sustainable development is becoming a rapidly growing industry. It means living life without spoiling the environment for the future, but it does **NOT** mean giving up our useful technology to go back to horses and carts, etc. It means designing and engineering things with sustainable development in mind.

It is going to be a major part of science and technology from now on. Your lives in particular will be affected by it.

Cars

Cars are very wasteful and even the most modern cars pollute the environment.

Also, what was a shiny, new and very useful machine at the start of its life, eventually becomes a useless lump of mixed materials.



Possible 'sustainable' action to be taken

Every car should have two additional taxes added to its price.

One to pay for the cost of all the pollution and ill health it will cause in its lifetime. The second to pay for dismantling and recycling all the parts of the car when its life is over.

But this costs money.

Fuels: Carbon tax

All fuels contain carbon. This burns in air to make carbon dioxide, which adds to the greenhouse gases in the atmosphere. The global warming and climate change caused by the increasing amounts of greenhouse gases is very costly. Billions of pounds are spent each year repairing damage done by the storms caused by global warming.



Possible 'sustainable' action to be taken

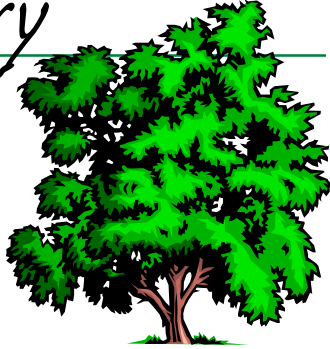
There should be an extra tax on every tonne of coal, every litre of motor fuel, every bag of charcoal and every unit of gas or electricity to pay for the damage that the extra carbon dioxide does to the environment.

But this costs money.

Sustainable development

Forestry

Trees, and the wood they produce, are essential raw materials for paper, furniture and a huge variety of uses in the building industry. They are a valuable money earner when cut down. Trees absorb carbon dioxide from the air to grow. They help balance the amount of oxygen and carbon dioxide in the air.



Possible 'sustainable' action to be taken

For every tree cut down and sold, there must be two new ones planted and looked after until they grow to full size.

More trees need to be planted than cut down.

But this costs money.

Biodiversity

There is a huge variety of habitats in every country. Forests, hedgerows, meadows, wetlands, mountainside gorse and sand dunes all exist in the UK, but only farmland – grassy meadows for grazing and cultivated fields – makes a lot of money.



We spend much of our time clearing forests, ripping up hedgerows and draining wetland to turn them into farmland. When we do this we endanger and destroy the species of plants and animals that live in these habitats. We are reducing rapidly the variety of living organisms in our environment.

Possible 'sustainable' action to be taken

Keep track of the diversity of living organisms. Take measures to ensure there are adequate amounts of habitats for all the species. Protect endangered habitats such as wetlands.

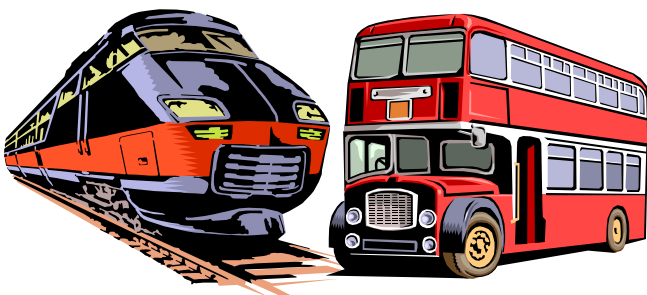
But this costs money.

Transport

Personal transport such as cars are usually only used by one or two people at a time. They are very wasteful in terms of the amount of space they occupy and the amount of fuel they use.

Public transport makes much better use of fuels and space on roads and in cities.

Public transport is much less polluting than lots of small cars running everywhere.



Possible 'sustainable' action to be taken

To keep the world a cleaner place for future generations we need to invest in cheap, quick, effective public transport networks.

Some examples may be:

- Pollution-free electronic cars and trams in towns
- High speed rail networks instead of motorways
- Offshore airports to cut noise pollution.

But this costs money and can be inconvenient.

Sustainable development

Renewable energy

All fuels contain carbon. This burns in air to make carbon dioxide, which adds to the greenhouse gases in the atmosphere. The



global warming and climate change caused by the increasing amounts of greenhouse gases is very costly. Billions of pounds are spent each

year repairing damage done by the storms caused by global warming.

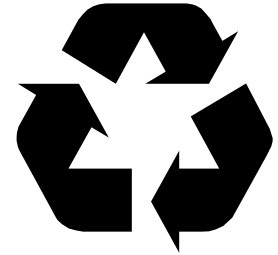
Possible 'sustainable' action to be taken

There should be an extra tax on every tonne of coal, every litre of motor fuel, every bag of charcoal and every unit of gas or electricity to pay for the damage that the extra carbon dioxide does to the environment.

But this costs people money.

Recycling

Why should a fridge or washing machine get dumped for the council to take away? Someone has had a lot of use from it – then it just gets dumped with the rest of the rubbish.



Rubbish needs to be sorted into what could be recycled and what cannot be.

Possible 'sustainable' action to be taken

When you buy a fridge you should also pay the cost of getting it recycled safely. Waste disposal systems at home should sort out waste and send all the glass, paper and card, metal and rubber for recycling. The rest could be burnt to produce energy for neighbourhood heating schemes, or to generate electricity. Waste plant and food material should be composted to produce fertilizer. This sorting should be done by the people who make the waste **before** it is collected.

But this costs people time and money.

Activities

- 1 All the proposed actions for the seven areas of concern above cost money. The benefit will be for the people who have less environmental problems in the future, but none for the people who live now.

Design parts of an advertising campaign to persuade people that this is a benefit to their lives.

Produce slogans, leaflets, posters, radio adverts, storyboards for TV adverts or videos for the campaign.

- 2 Other areas of concern could be health care, agriculture and chemicals, nuclear power, space rubbish and air pollution. Find out about one of these and write a paragraph with possible action to be taken.

There will need to be a "scientific" argument in your advert or people will not see the sense in it.

- 3 If you can, go ahead and produce the ad or video from question 1. Remember – you will lose people's interest after 30 seconds of an advert.