



Which way-ste is best- how to do the activity

Aim of activity

The aim of this activity is to facilitate the group in discussing the two main methods of treating general waste:

1. Thermal Recovery (also known as Energy Recovery) or Incineration
2. Landfill

The activity allows groups to research these two methods of disposing of general waste. They are then encouraged to choose the technology that they prefer as a waste solution.

By using a scenario, the individuals have to think of wider issues than just the actual technology. They are encouraged to consider other environmental and social impacts when choosing a waste solution.

Ask the group to consider the scenario of a small town looking for a solution to their treatment of general waste. They have the choice of the two options above.

Possible programme of the activity:

Activity	Discussion / Learning points
<p>Whole class discussion about what "general waste" is. Perhaps ask the group to list these sorts of waste items</p> <p>Discuss that some items could be disposed of at the local Household Waste Recycling Centre / textile banks</p>	<p>Waste that cannot be reduced, reused, recycled or composted</p> <p>(plastic packaging, film, broken toys, dog and cat waste, nappies, toothpaste tubes, old textiles, broken pottery, the list is endless)</p>
<p>Whole class discussion about what the social or environmental concerns of local citizens might be for any type of general waste disposal</p> <p>How general waste disposal would impact on the environment and people</p>	<p>How the waste is collected from households / transport of waste to the site / potential pollution problems of air and water / location of site / odour / noise / pests</p>





Activity	Discussion / Learning points
Where in relation to the town should the waste disposal site be located?	<p>Would people prefer an out of town site even though this increases the distance the waste would have to travel?</p> <p>The further away the site, the more it may have an implication on whether a council would want individual bin trucks to travel straight to site or "transfer load the waste "</p>
Facilitate access to the "Burning of general waste information sheet" and the "Landfill Information sheet" and powerpoint.	
Set a time to enable students to research the information	
Students present the pro's and con's of each waste solution	
Students present their preferred option	



Potential outcomes and discussion points

In real life, the choice of a waste technology is very complex. There is a definite move away from landfill. The Landfill Directive following European legislation set out demanding targets to reduce the amount of biodegradable municipal waste sent to landfill. This has made landfill an expensive option, combined with the competition for land and planning restrictions. Authorities have had to consider different solutions such as Incineration, Gasification, Pyrolysis, Mechanical Biological Treatment.





Possible pro's and con's of Incineration



Pros	Cons
An effective way to dispose of general household waste as they can continuously burn 24 hours a day 365 days a year. There is very little left over ash at the end of the process	Once items have been burned the resources are lost forever
Modern Energy Recovery Facilities (ERF's) also produce electricity from the heat generated by the furnace	The lime used in the gas cleaning process is quarried which has an impact on the environment and resource depletion
Many ERF's are able to send the heat generated directly to local heating schemes / industries / landmark buildings	ERF's are often built away from residential areas so the waste has to be transported some distance often by road but can be by rail
ERF's take up a lot less room than a landfill site	
Modern ERF's are architect designed buildings and often sympathetic to the surroundings	



Possible pro's and con's of landfill



Pros	Cons
Some environmental organisations believe that old landfills could be mined for useful materials in the future	An expensive way to dispose of general household waste due to landfill tax.
Landfill sites can generate energy from the methane gas	Landfill takes up a lot of land out of useful production
Restored landfill sites can be excellent for wildlife and many have become nature reserves	Landfill sites are often built away from residential areas so the waste has to be transported some distance often by road
	Landfill sites can be considered unsightly in the landscape

