# Life Cycle Assessments

## What is Life Cycle Assessment (LCA) ?

- Considers each stage of the life of a product
- Looks at the environmental impact at each stage

## Choice of material

### Metals

- mined and extracted from ores
- involves a lot of energy
- causes pollution

### Materials for chemical manufacture

- crude oil often used
- a non-renewable resource
- needs a lot of energy for extraction and refining
- generates pollution

## Manufacture

- uses a lot of energy
- uses water
- treated before returning to source
- Can emit CO or HCl gases
- disposal of waste needed

## Product use (examples)

- burning fuels releases greenhouse gases
- fertilisers can leach into rivers
- Paints could give off toxic fumes

## Disposal

- Often in a landfill
- biodegradable products decay quickly
- non-biodegradable products take years
- products can be burnt
- but can result in air pollution
- recycling products reduces the impact of disposing of it
- reduces amount of resources to make new products