Fixing fashion

A life-cycle assessment looks at every stage of a product's life and assesses the impact it has on the environment. In this activity you will carry out a life-cycle assessment for a cotton garment before considering what you can do to minimise the environmental impact of your clothing choices.

1. a. On a copy of the article, highlight in different colours the paragraphs that relate to each of the following stages in the life cycle of a cotton garment.

   Obtaining the raw material

   Garment production

   Transport

   Retail process

   Product use

   Disposal

   b. Complete the table below by making brief notes on the environmental impact of each of the different stages.

Stage of production	Sub-stage	Environmental impact
Obtaining the raw materials	Growth of the cotton **High or low (Depends on the farming method)**	*Farming methods and their environmental impact can vary significantly.* *Irrigation and use of fertilisers and pesticides all have a large environmental impact.* *Rain fed cotton and use of beneficial insects to combat pests have a smaller environmental impact.*
Garment production	Ginning, spinning, knitting or weaving **Low**	*Fairly low environmental impact mostly associated with energy use.*
	Scouring, bleaching, colouration and addition of functional finishes **High**	*All of these processes use a lot of energy, water and industrial chemicals.*
	Cutting and sewing **Low**	*Has a low environmental impact.*

Transport	Container shipping **Low**	*Surprisingly small.*
Retail process	Selling in retail stores and online **Low**	*Quite a low environmental impact compared to other stages in a garment's life cycle. The warehousing and logistics of restocking shelves adds to the overall carbon footprint of a garment. Unsold goods create a lot of waste.*
Product use	Washing and drying **Medium/High**	*Washing, drying and to a smaller extent ironing can have a significant environmental impact in terms of water, energy and chemical use.*

c. Based on your notes, allocate each **sub stage** as having either a **high**, **medium** or **low** impact on the environment.

2. Describe and explain three different ways in which you can reduce the environmental impact of your clothing.

Method *Wash clothes less often.*

Explanation *Washing clothes uses large amounts of water as well as using industrial chemicals in the form of washing powders. By washing clothes less often, less water and chemicals will be used and released into the waste water treatment system.*

Method *Wash clothes at a lower temperature.*

Explanation *Washing clothes at a lower temperature requires less energy. Activators within washing powders have been modified to allow for low temperature washing.*

Method *Dry clothes on a washing line.*

Explanation *Drying clothes in a tumble dryer requires large amounts of energy that can be saved by line drying.*

Method *Keep garments for longer or buy second hand.*

Explanation *Wearing garments for longer or buying second hand garments means less new clothes will need to be produced.*

Method *Extend a garment's life by fixing, refashioning or upcycling it.*

Explanation *By fixing, refashioning or upcycling a garment, the garment's life has been extended meaning that fewer new clothes will need to be produced and the resources extracted to make the garment are reused.*