

High School Environmental Science: Trashion Show

Standard

EV5. Obtain, evaluate, and communicate information about the effects of human population growth on global ecosystems.

5a. Construct explanations about the relationship between the quality of life and human impact on the environment in terms of population growth, education, and gross national product.

5b. Analyze and interpret data on global patterns of population growth (fertility and mortality rates) and demographic transitions in developing and developed countries.

5c. Construct an argument from evidence regarding the ecological effects of human innovations (Agricultural, Industrial, Medical, and Technological Revolutions) on global ecosystems.

5d. Design and defend a sustainability plan to reduce your individual contribution to environmental impacts, taking into account how market forces and societal demands (including political, legal, social, and economic) influence personal choices.

Teaching Tips

Preparation Obtain tools and supplies on Materials list including used fabric and clothing; encourage students.

Directions for this lesson are written for teachers. Provide students with the Investigation Lab Report from appendix.

Phenomenon: Present phenomenon in lesson without explanation before or after students view it.

What Do you Notice? Engage students in writing an explanation (or labeled drawing) that tells who, what, why, how.

What Do you Wonder? Engage students in asking their own questions, which will form the basis for their research.

Student Research After each student writes a question, consider placing each question on a sticky note, grouping them in categories, and allowing students to learn more in small groups according to their interests. A curated collection of articles is provided for use in small groups, using the Jigsaw protocol. <https://www.jigsaw.org/>

Teacher-Directed Activity

Show this video to the class to clarify the problem: The Ugly Truth about Fast Fashion by Hassan Minaj

https://m.youtube.com/watch?fbclid=IwAR2mJorOZdlg3tWbijlwCr_xlrxlu9Fj8grPVp4gLH17pCH8iAPIExBBLg&v=xGF3ObOBbac

Share and discuss this UN Report on Sustainability in the Textile Industry: <https://eco-age.com/resources/un-environment-programme-report-elisa-tonda-sustainability-and-circularity-textile-value-chain/>

Provide some of these examples to inspire students for the Challenge:

Duck Tape's [Stuck at Prom](https://www.duckbrand.com/stuck-at-prom); <https://www.duckbrand.com/stuck-at-prom>

The Green Hub's [Make Do and Mend](https://thegreenhubonline.com/2018/11/26/make-do-mend-how-to-diy-clothes-without-being-a-creative-whizz/);

<https://thegreenhubonline.com/2018/11/26/make-do-mend-how-to-diy-clothes-without-being-a-creative-whizz/>

Makerist's [Making Fashion Sustainable](http://blog.makerist.com/making%E2%80%8B-fashion-sustainable-a-makers-guide-to-sustainability/);

<http://blog.makerist.com/making%E2%80%8B-fashion-sustainable-a-makers-guide-to-sustainability/>

Crocheting Plastic Bags into Mats; <https://www.goodshomedesign.com/volunteers-crochet-plastic-bags-into-sleeping-mats-for-the-homeless/>

Zero Heroes Lesson Activity This is an Eco-Engineering Challenge to re-make discarded clothing into something useful.

Revised Explanation Prompt students to address the standards highlighted above in their revised explanations.

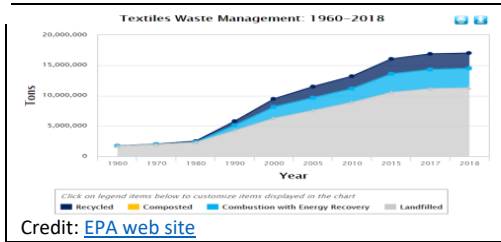
Teacher Resources

Wandy the Maker on TikTok- <https://www.tiktok.com/@wandythemaker?fbclid=IwAR1YJ-IR0qPYBiRR-t4naRc5xKKxisy1c4orQW45INcY-IOXXXFhSt5oQls>



Environmental Science - Eco-Engineering Challenge: Trashion Show

The Phenomenon



What Do You Notice? (tentative explanation)

Engage students in writing about what they noticed when observing data about the phenomenon, including who, what, when, where and how it happens and how they can personally contribute to sustainability. This will serve as their tentative, initial explanation.

Graph: <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/textiles-material-specific-data>

What Do You Wonder?

Engage students in asking their own questions about the unexplained phenomenon. These questions will form the basis for student research.

The Challenge

- Create a wearable or functional clothing item or accessory by transforming previously-used fabric/clothes. OR
- Repair a torn, broken, or damaged article of clothing so that it is suitable for future use (and possibly restyled) OR
- Organize a Trashion Show or dance, and invite fellow students to create and/or wear re-made or repaired clothes
- Whatever project is selected, provide before and after pictures that show the transformation of used fabrics

Materials Needed

- Used fabrics, table cloths, and clothing, or discards and remnants from fabric stores (not school lost and found)
- Fasteners: Duct or bonding tape, needle and thread, safety pins, hook-and-loop fasteners, safety pins, buttons
- Iron (if fabric bonding tape is used)
- Scissors and pinking shears (which can reduce edge fraying without the need to hem)

Curated Articles for [Jigsaw Research](http://www.jigsaw.org) www.jigsaw.org

Ethical Consumer: [What is Fast Fashion and Why is It a Problem?](https://www.ethicalconsumer.org/fashion-clothing/what-fast-fashion-why-it-problem)

<https://www.ethicalconsumer.org/fashion-clothing/what-fast-fashion-why-it-problem>

Insider; Nov 8, 2021: [Mountain of Unsold Clothing from Fast Fashion Retailers Piling Up in Chilean Desert](https://www.insider.com/discarded-fast-fashion-clothes-chile-desert-2021-11)

<https://www.insider.com/discarded-fast-fashion-clothes-chile-desert-2021-11>

The World Bank; Sep 23, 2019: [How Much Do Our Wardrobes Cost the Environment?](https://www.worldbank.org/en/news/feature/2019/09/23/costo-moda-medio-ambiente)

<https://www.worldbank.org/en/news/feature/2019/09/23/costo-moda-medio-ambiente>

GirlSpring, Jun 1, 2020: [Fast Fashion and What It Means for the Planet](https://www.girlspring.com/fast-fashion-and-what-it-means-for-the-planet/)

<https://www.girlspring.com/fast-fashion-and-what-it-means-for-the-planet/>

SustainYourStyle: [Reducing Our Impact](https://www.sustainyourstyle.org/en/reducing-our-impact) <https://www.sustainyourstyle.org/en/reducing-our-impact>

US News; Wazir, Zoya; Nov 10, 2021: [How Fashion Dumps into the Global South](https://www.usnews.com/news/best-countries/articles/2021-11-11/how-dead-white-mans-clothing-is-clogging-the-global-south)

<https://www.usnews.com/news/best-countries/articles/2021-11-11/how-dead-white-mans-clothing-is-clogging-the-global-south>

Investopedia; Hayes, Adam; April 29, 2021: [Fast Fashion](https://www.investopedia.com/terms/f/fast-fashion.asp) <https://www.investopedia.com/terms/f/fast-fashion.asp>

Revised Explanation

Allow students to return to their original explanations and revise them to reflect what they learned in this lesson. The explanations should relate to highlighted parts of the standard including ecological effects of human actions and innovations on global ecosystems; and creating a personal sustainability plan to reduce environmental impacts.

