

WHAT MY JEANS SAY ABOUT THE GARMENT INDUSTRY

AGE

15+

AIMS

Students unfold the hidden cost of fast fashion through the life of a pair of jeans, the most polluting item in our wardrobes from an environmental and social standpoint. Students gain the awareness to impact change through their choices. The knowledge to become catalysts of positive change. The instruments to make a conscious decision: do we want to be consumers of fashion or Fashion Revolutionaries working for the benefit of all of us?

MATERIALS:

- paper
- art materials
- pens and markers
- optional additional material for station-specific activities

INSTRUCTIONS

- divide the classroom/gym/common space into 5 zones, one per related station: water, chemicals, fossil fuel, waste, and climate change.
- depending on the size of the group, you can decide to divide the students into groups and assign them to one of the 5 stations, or you can work through all of the stations with one single group.
- in each station ask students to read out loud our Fashion Facts and follow the "Stations Guidelines" for optional extra activities to deliver the message.
- once all groups, or the singular group, have rotated through the five stations, gather students together and ask them what fact shocked them the most. Open a debate.
- ask students to wear their sweater/t-shirt/jacket inside-out and introduce the last important cost embedded in our clothes: people. #WhoMadeMyClothes?

WORKSHEET

STATION 1 – WATER

Our journey begins in Xintang, China, denim's world capital with approximately 260–300 million pairs of jeans being produced per year and consumed at an always faster rate due to their cheap price and people's disconnection from their real value. They retail for anything from US \$5.99 – 99.99, but what is their true cost?

A single pair of jeans needs 9,500 litres of water to be produced. Water necessary to grow the cotton it is made from and for the finishing steps of its manufacturing process

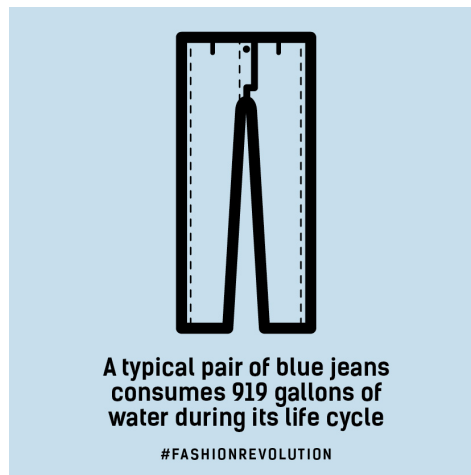
FASHION AND WATER FACTS:

1. Fashion is today the second most impactful industry worldwide in terms of consumption and pollution of our waters (approx. 1 trillion gallons). Over a billion people today do not have access to drinking water.
2. The World Bank sent the alarm: 20% of global water pollution comes from the fashion industry.
3. In China, where cheap fashion manufacturers dump 2.5 billion tons of waste products into water streams every year, 40% of the rivers and lakes are highly toxic.
4. Cotton, with which denim is made, is a thirsty fabric: the 4th largest sea in the world, the Aral Sea, disappeared in 2015 as the rivers that flowed into it were diverted to feed cotton crops.
5. pH levels in the waters around Xintang go as high as 11.9–12.1, due to the waste products that are discharged in the rivers. This renders life for fish and other species impossible, and causes skin, eye and mucous irritation to humans.

OPTIONAL TASK

Source cotton plants. Ask students to try to pick the cotton, and weave it into threads. Having the origin of denim in your hands, a plant that needs a lot of water and care to grow, is a powerful tool to increase awareness about the value of denim.

Where to look for cotton? Ask your local florist, who will be able to guide you.



TAKE ACTION

- Choosing to extend the life of our clothes by just 9 months can reduce their water footprint by 25–30%.
- Opting for certified organic fibres means that no polluting chemicals have been used to grow them.
- Be curious! There are a variety of alternative natural fibres that are less water-needy, like hemp which uses 55% less water than cotton.
- Did you know that putting your jeans overnight in the freezer will kill 99% of their bacteria and help us save the energy and water we would use to wash them.

WORKSHEET

STATION 2 – CHEMICALS

Greenpeace has analysed 21 samples of water in Xintang, China. 17 of these contained highly toxic heavy metals all coming from the chemicals used to dye and finish our jeans: mercury, cadmium, lead and copper.

Waters in the area are blue, because of the chemical indigo dye used in our jeans. The dust in its streets is blue, as denounced by another Greenpeace report, and the lungs of the workers are embedded with fine silica, which can lead to a serious lung disease called silicosis.

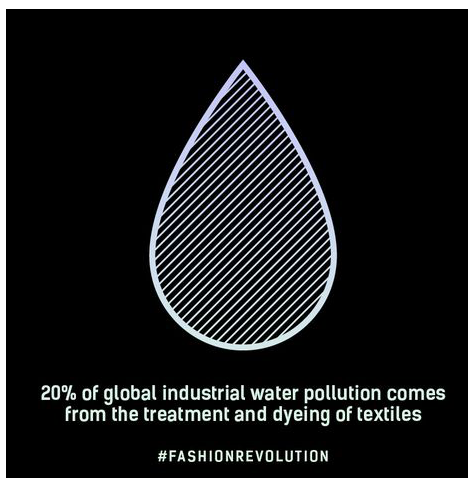
1/3 of the jeans we buy come from Xintang.

FASHION AND CHEMICALS FACTS:

1. The production and finishing of fashion items today requires 9 billion kg of chemical substances each year.
2. Out of the 2,000 chemicals that cheap fashion normally require, only 16 are approved as safe for human health by the EPA (Environmental Protection Agency) in the US.
3. 3kg of chemicals go into a single pair of jeans made in Xintang, China. Lead, Cadmium and Copper have leached into the soil, while Cadmium levels are 128 times above the norm.
4. Cotton, the fibre used to make denim, is chemical-thirsty too: only 2% of our planet's land is allocated to cotton crops and it uses 25% of the world's pesticides and 11% of the world's insecticides.

OPTIONAL TASK

If you are familiar with natural dyes, bring to school a natural indigo dye kit pre-prepared at home. Ask students to source raw denim or unusable fabrics from local stores or garment factories and let them try dying in total safety on their own while at this station. This fun activity helps them understand the steps a simple cotton fabric has to go through before it achieves the type of fade, wash and dye we find on the market.



TAKE ACTION

- Look for certifications on the label that no hazardous chemicals have been used to make your clothes! Common ones are:
 - GOTs: Global Organic Trade Standards
 - REACH Compliance Certificate
 - OEKO TEX
- Check out garments that are naturally dyed using plants with dyeing properties. The blue of the denim was obtained using natural indigo dyes for example.
- Make sure your favorite brands subscribed to Greenpeace DETOX initiative! <http://www.greenpeace.org/international/en/campaigns/detox/fashion/detox-catwalk/>.

WORKSHEET

STATION 3 – FOSSIL FUELS

Real denim is made of a 100% cotton. Reality is that today in the market between super stretchy jeans, jean leggings, jeggings, and everything else fast fashion comes up with every season, more and more petrol-based substances find their way in our clothes: polyester, nylon, elastane.

Fossil fuels are the biggest contributors to climate change, and 90% of the fabrics of the clothes we wear today come from oil.

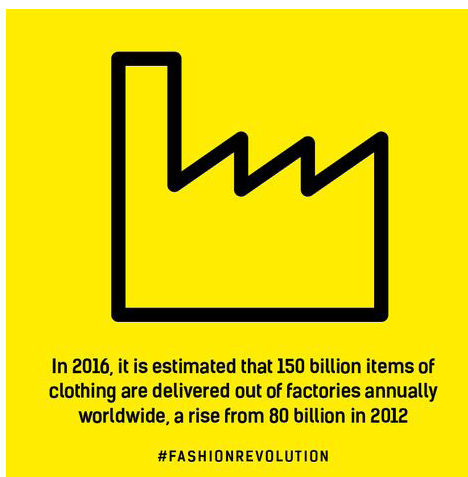
FASHION AND FOSSIL FUELS FACTS:

1. 90% of our clothes contain nylon, polyester, spandex, acrylic. These materials all come from oil.
2. Producing these fibres requires a lot of energy, and the manufacturing process in turn emits a lot of CO₂ into the atmosphere.
3. For every ton of polyester produced, five tonnes of CO₂ are emitted.
4. Pollution from fossil fuels in general causes a lot of harm to the environment and human health. Having our skin exposed to these type of synthetic fibres rich in chemicals can also cause allergies and irritations.

OPTIONAL TASK

Would students buy into retail up-selling techniques if they were truthful?

Bring one or more pairs of denim jeans, which contain polyester or elastane in some percentage. Pick two volunteers for an in-store role-play, with one being the shop assistant and the other a potential customer. The shop assistant will act out the lines provided in Addendum 1. Let's see how the customer reacts!



TAKE ACTION

- Check the garment label for natural fibres that do not use polyester or other petroleum-based synthetic fibres; you know you will have contributed to saving CO₂ emissions!
- Do the best for yourself and your wallet: 100% natural fibres are more durable and stronger. You'll buy less, save more money through the year, and reduce your carbon footprint!

WORKSHEET

STATION 4 – WASTE

In the world on average 2,7 billion metres of denim are produced each year, for a global US \$57 billion market. This denim constitutes only 0.6% of the yearly production of textile fabrics which goes up to approx. 400 billion metres.

All of this fabric is either made into clothes that fast fashion has gradually led us to consider as disposable goods, or is never even used: around 60 billion metres of fabric a year are discarded right away.

FASHION AND WASTE FACTS:

1. Only 15% of all fashion products are actually recycled or up-cycled.
2. 85% of our clothes are disposed of into landfills where it can take up to 40 years for them to decompose if they contain nylon, or 200 years if they contain polyester.
3. While they decompose, they continue to pollute our earth and soil as all of the chemicals and heavy metals they contain are released into the environment.
4. On average 14 million tonnes of clothing are trashed each year in the US alone; putting them through a recycling programme would be the equivalent of taking 7.3 million cars and their carbon dioxide off the road every year.
5. Every ton of clothing that gets recycled saves the emission of 20 tonnes of CO₂.

OPTIONAL TASK

How many years does it take for our clothes to decompose? Ask students to dig in, and find out. Fill a large basket with dirt and bury some clothes that contain long-decomposing times fibres. On each item attach a tag that communicates the date-of-birth and date it was trashed followed by the date it will disappear in nature (ex. a t-shirt containing polyester will say "Made on 06.02.2016 / Trashed on 06.03.2016 / Will decompose in a landfill by 06.03.2216"). Students will get their hands dirty to unfold the impact of fashion waste.



TAKE ACTION

- Extend the life of your clothes! Nine extra months translates to a reduction of your carbon and water footprint of 25–30%!
- Fall in love with what you buy! Buy less, buy better!
- There are many fun ways to repurpose your old wardrobe items and make them look cool again! Upcycling is the way to go!
- Ever tried clothes-swapping? Organise a party with your friends and ask everyone to bring their old clothes: what may be old and boring to you could be a gem for your friends!

WORKSHEET

STATION 5 – CLIMATE CHANGE

A single pair of jeans, on average, emits 34kg of CO₂ to be produced, similar to taking a car and driving for 111km. Likewise, other fashion items, being fossil-fuel dependent, produce enormous amounts of CO₂ and other greenhouse gases which contribute to global warming.

The way we treat our jeans and clothes after-purchase can have a significant impact on their carbon footprint, including the way and frequency with which we wash them (on average jeans are washed every other use. Washing them every 10 times would reduce their impact by 65-70%).

FASHION AND CLIMATE CHANGE FACTS:

Fashion supply chains are very often spread all around the world. Moving fabrics, accessories, clothes involves enormous amounts of energy and use of fossil fuel. A t-shirt made in China for example, before hitting the shelves of a store in the US, is already responsible for the emission of 1kg of CO₂.

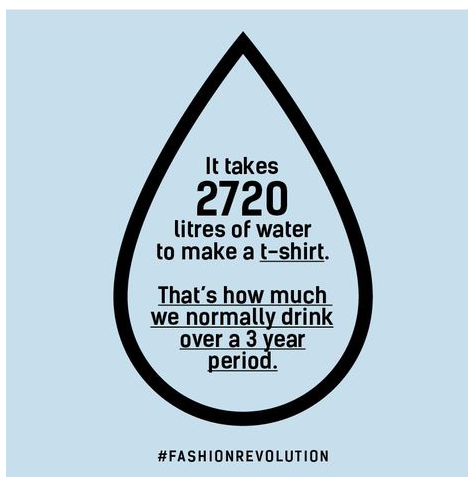
1. In China alone textile factories emit 3 billion tons of soot each year, causing concerning respiratory problems to citizens who live in these areas and impacting the environment.

2. Synthetic fibres like polyester and nylon require a massive amount of energy to be produced and contribute to the emission of greenhouse gases like CO₂ and nitrous oxide, the impact of which on global warming is 300 times the same amount of carbon dioxide. For every ton of polyester produced, it is estimated that 9.52 tonnes of CO₂ are emitted.
3. The concentration of GHGs (Greenhouse gases) in the atmosphere reached 397.7 ppm (parts per million) in 2014 and exceeded the alert limit of 400 in 2015 and 2016.

OPTIONAL TASK

GAME TIME: divide your group into 2 teams and kick off the Climate Change Quiz. There are many fun ways to organise a quiz game in teams, we chose the flag-game as an option:

- a. place the two teams in lines facing each other in the room; each member in each team will be assigned to a number. Same numbers have to face each other;
- b. choose one student to hold a flag and place him/her in between the two teams. The flag holder is also the one who will be asking the questions;
- c. After having asked the question, the flag holder will call out a number. The students in the two teams to whom that number was assigned will have to run to get the flag, and the first one to catch it will have the chance to answer the question. One point in case of positive answer!



TAKE ACTION

- Extend the life of your clothes! Nine extra months translates into a reduction of your carbon and water footprint of 25-30%.
- Substituting organic fibres for conventionally grown fibres is better in all respects: uses less energy for production, emits fewer greenhouse gases and supports organic farming. A study published by Innovations Agronomiques (2009) found that 43% less GHGs are emitted per unit area under organic agriculture than under conventional agriculture.
- When you do your laundry, make sure you have a full load and switch to cold washing. That can save you up to 725 kg of CO₂ emissions per year.

Refer to Addendum 2 for Quiz Questions.

WORKSHEET

STATION 6 – PEOPLE

The last important piece to the puzzle is people. Humans make our clothes. Men and women, often underage and/or under-paid for the job, exposed to health and safety hazards every day to allow us to spend always less on clothing and consume always more. Fashion Revolution came to life after the Rana Plaza disaster in Bangladesh which killed 1,138 and injured more than 2,500 innocent people whose life and human rights became secondary to the brands' need to increase profit margins.

HERE ARE SOME FACTS

- Around 40 million people are employed in fashion manufacturing today, and 85% of them are women. In Bangladesh, according to a 2011 SticheUp report, 3/4 of them are regularly verbally abused at work and half of them are physically beaten.
- The minimum wage for garment workers in Bangladesh is US\$0.32 cents per hour.
- According to the International Labour Organisation 170 million children are engaged in child labour around the world, with most of them being exploited by fashion manufacturers.
- Children work at all stages of the supply chain in the fashion industry: from the production of cotton seeds, the harvesting, and yarn spinning, to clothing manufacturing.

- Working days are 10–12 hours long and are as much as 18 hours long at peak times; overtime is often mandatory.
- Taking time off work for emergencies or medical needs often results in a cut in wages or termination of the contract.
- Pregnant women often face abuse and discriminatory treatment.
- Immigrants, these days especially in Turkey, are often hired without regular contracts or permits, leaving room for additional forms of mistreatment and discrimination by the employers.
- The right of workers to form unions is often not recognised and workers who attempt to do so are usually fired.



OPTIONAL TASK

Put the group back together and open up a debate:

- Which Fashion Fact did you find the most shocking? Why?
- What are things we can do to positively impact the environmental footprint of what we wear?
- How important is, in your opinion, your voice in this?
- Now ask students to wear their clothes inside-out, showing their labels. Take a selfie and send it to the brand asking #whomademyclothes.

SHOW A FILM

If you have internet connection you could start by showing a video to the students – the Child Labour Experiment by Fashion Revolution Germany is a good one <https://www.youtube.com/watch?v=8gA97UjCOU> or there are more on the Fashion Revolution Film Library Pinterest Board <https://uk.pinterest.com/fashrevglobal/film-library>.

ADDENDUM 1

STATION 4 – ROLE-PLAY

IN-STORE TRANSPARENT EXPERIENCE

Aim: create an un-real shopping experience where the truth about our denim is told. How would you react as a customer if you really knew what's behind our clothes?

Student 1: shop assistant

Student 2: customer

Have student 1 act out an in-store experience situation following the following lines. Student 2 will improvise and support the story telling.

GREETING FROM STUDENT 1

- "Hi, welcome to xxx! Today we have a special offer on our special denim! Two pairs for £ 19.99!!!"

SELLING LINES FROM STUDENT 1

- "Check these out. Our newest super-stretchy denim. They contain 30% elastane which gives it this nice stretch! It is nothing but oil! Pretty neat what we can do with fossil fuels these days uh? Always loved the smell of gasoline, now I can actually wear it!"

- "You love it right? I know. And these washes?! They were made with bleach! Somewhere in China, it's better over there as regulations are not as strict on the environment."

- "Only £19.99 for two! I mean, you don't really have to think about it that much at this price. Wear them at the party this weekend, you are going too, right? Cool. Then come back next week, I'll show you the other ones that are coming in. Even cheaper I heard..."



ADDENDUM 2

CLIMATE CHANGE QUIZ QUESTIONS

1. What's the percentage of clothing that is properly put through a recycling program each year?

- 85%
- 5%
- 15%

2. For every ton of polyester produced, we emit the equivalent of:

- 1 ton of CO₂
- 5 tonnes of CO₂
- 7 tonnes of CO₂

3. What is an alternative way to wash with your jeans that could save us some energy consumption?

- brushing them with your toothbrush
- rubbing them against each other
- putting them in the freezer

4. If we all committed to increasing the lifespan of our clothes by at least 9 months, what would be the impact of our action?

- our mates would make fun of us for not updating our wardrobe on a weekly basis
- clothes would decompose in nature without causing any harm to the environment
- we would decrease our carbon footprint by 25%

5. Which plant allows us, for the same amount of land, to produce 200% more fibre for textile and use 50% less water?

- bamboo
- roses
- hemp

APPENDIX

SOURCES

STATION 1 – WATER

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