

# Water Quiz Sheet – The Life Cycle of a T-Shirt



**GREEN-SCHOOLS**  
**STAY HOME - WATER**

The Life Cycle of a T-Shirt, by Angel Chang was uploaded to TED-Ed in 2017 and 'Considers the classic white t-shirt. Annually, we sell and buy 2 billion t-shirts globally, making it one of the most common garments in the world. But how and where is the average t-shirt made, and what's its environmental impact?'



<https://ed.ted.com/lessons/the-life-cycle-of-a-t-shirt-angel-chang>

**Instructions:** Watch the video in two parts and give yourself the quiz or do it as a group at home or online with a school group.

The 1st part of the quiz goes to 2.08mins then pause, answer the questions if by yourself or if doing it with others, someone asks the questions and each person/group answers and then restart the video when you're ready for the 2nd part of the quiz.

Only go to page 4 when you're ready to correct the quiz answer sheet on page 3.

# Questions

## Part 1:

1. How many t-shirts do we buy globally every year?
2. Name 3 locations where a typical cotton t-shirt starts its life?
3. What is the name of the machine that separates the fluffy cotton boll from the seeds?
4. What do cotton plants generally use huge quantities of to grow the cotton?
5. How much water is used to grow the cotton needed for the average t-shirt?
6. Are there any downsides to the use of pesticides? If yes, name two.
7. What % of total cotton production is organic cotton?
8. What happens to the cotton when it leaves the textile mill and arrives in a spinning factory? (6 steps are listed; you get a point for each step you can remember)
9. The cotton sheets are rough and grey when they come out of the knitting machines in the mills, what turns them soft and white?

## Part 2:

10. Bleach and azo dyes make up the vivid colouring in 70% of textiles; what are the ingredients in these dyes that are damaging to human health and the environment? (4 are listed; you get a point for each one you can remember)
11. In some countries the entire production process of fabric barely touches a hand; what stage are people still directly needed for?
12. What country is the biggest exporter of cotton t-shirts?
13. How many people are employed to make t-shirts in the biggest exporting country?
14. What % of global carbon emissions does clothing production account for?
15. Garment production from 1994 – 2014 has increased by what %?
16. Dryers use 2-3 time more energy than washing machines; true or false?
17. What are the 1<sup>st</sup> and 2<sup>nd</sup> most polluting industries worldwide?
18. What does the video suggest that you can do to help improve the situation? (7 ideas are listed; you get a point for each one you can remember)



## Answers:

1. 2 Billion a year
2. On a cotton farm in USA, China or India
3. An industrial cotton gin
4. Water and pesticides
5. 2,700 litres or 30 bathtubs
6. Yes, they are carcinogenic (cancer causing) damaging the health of workers and damage surrounding ecosystems
7. < (Less than) 1% of total cotton production (22.7 million metric tonnes)
8. High tech machinery does the following to the cotton: 1) blends, 2) Cards, 3) combs, 4) pulls, 5) stretches and 6) twists into ropes of yarn.
9. Heat and chemicals
10. Cadmium (Cd), Lead (Pb), Chromium (Cr) and Mercury (Hg)
11. The stitching of the t-shirts
12. Bangladesh
13. 4.5 million people
14. 10%
15. 400% to 80 billion garments a year
16. False, it's 5-6 times more energy
17. 1st) Oil and 2nd) Fashion
18. 1) Shop 2<sup>nd</sup> hand, 2) buy clothing made from recycled or organic fabrics, 3) wash clothes less, 4) Line dry and 5) donate, 6) recycle or 7) reuse old clothes.

Learn more about fast fashion here:

<https://www.rte.ie/brainstorm/2018/0321/948976-the-high-cost-of-fast-fashion/>

<https://7billionfor7seas.com/fast-fashion-facts/>