

## CONFLICT MINERALS – THE MINERAL'S JOURNEY TO OUR POCKETS AND BACK

**Our phones are made from countless minerals and raw materials, including "conflict minerals" from the Democratic Republic of the Congo: tantalum, tungsten, tin and gold (known as 3TG). These minerals are found in many of the products we use every day.**

For example, gold is used to make some jewellery and coins, but its use is growing in other industries, from electronics to medicine and nanotechnology to the automotive and food industries. Gold has also skyrocketed as an asset and is considered a safe haven for stock-market investors.

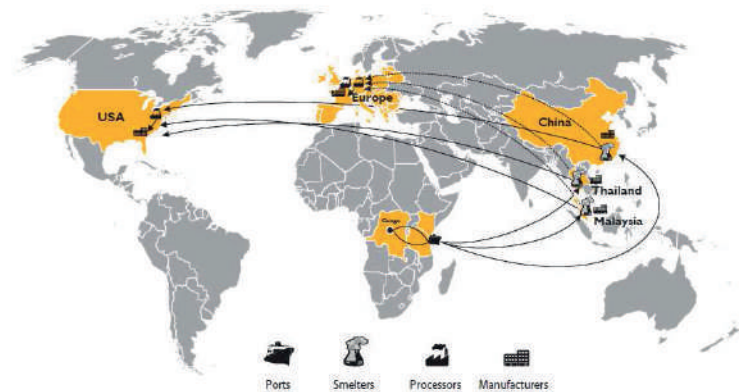
As for the three Ts, tantalum is perhaps the best known. It is widely used to make tantalum electrolytic capacitors. The main advantages of tantalum capacitors over aluminium ones is that they can store a higher load in a smaller space, hence the mineral's importance in small electronic devices, mobile phones, laptops, etc., as well as its high price. Eighty percent of the world's tantalum reserves are in the DRC.

Tin is mainly used in alloys with other metals, to protect them from corrosion. In fact, tin is used to coat steel to make tinplate. It is also used for the soft soldering of small parts in mobile devices, computers, automobiles and circuit boards, printers and transistors in general.

Finally, tungsten (wolfram) is a hard, dense metal mainly used to make drilling and cutting tools. Because it is rare and has such a wide range of applications, tungsten is considered a strategic mineral. Some of its main uses are as filament for incandescent light bulbs, electrical resistances, steel alloys for making special steels, alloys for cutting tools (e.g. for milling machines), the automotive industry (spark plugs) and for pen tips. Its use by the arms industry (in anti-tank shells, for example, which gave it a significant role in World War II), should also be noted

As we see in the graphic of the initiative from a well-known brand, once the minerals are extracted in the DRC they are illegally shipped to smelters in Asia, passing through neighbouring countries on their way. From there, they continue their journey to the smelters in Southeast Asia. This is a key point in the mineral's traceability, since once it is refined it is difficult to determine its source and under what conditions it was extracted. Furthermore, according to the "conflict-free smelters" initiative, the number of smelters is relatively small, so if the source of the raw materials certifies or guarantees that the minerals do not contribute to conflicts or human rights abuses and violations, we can ensure that no conflict minerals are used in the final product or technology. Several initiatives are currently working to accomplish this. One of them is the "the Responsible Minerals Initiative", formerly the Conflict-Free Sourcing Initiative, which audits smelters to ensure that their raw materials have no link to conflicts and human rights violations and abuses.

### Conflict Minerals Supply Chain



Once the mineral has been smelted down, it is used to make electronic devices in places like Southeast Asia, Mexico and Central America.

The part that we as consumers are most aware of, which affects us from the time we purchase a smartphone until we get a new one, is that phones are not generally owned directly: many network providers sell phones that are tied to contracts and are not "unlocked". Aspects such as programmed obsolescence and the impossibility or impracticality of repairing mobile phones should also be emphasised; consumers tend to buy a new device when their phones break down instead of repairing a broken part.

Finally, and to come full circle, let's talk about waste. When mobile phones aren't recycled correctly, they can harm both people and the environment in places like Ghana and Delhi, where old phones are taken apart to recover the minerals inside. Although the Basel Convention regulates the transboundary movements of hazardous wastes and their disposal, it is not always followed and there are still many situations that damage human health and the environment.

# ACTIVITY PROPOSAL

**Objectives:** 1.- To identify the production chain of electronic devices, from mineral extraction to device disposal.  
2.- To learn the impacts associated with the different stages of the production chain.

**Duration:** 90 minutes.

**Materials:** Video «The story of Stuff».

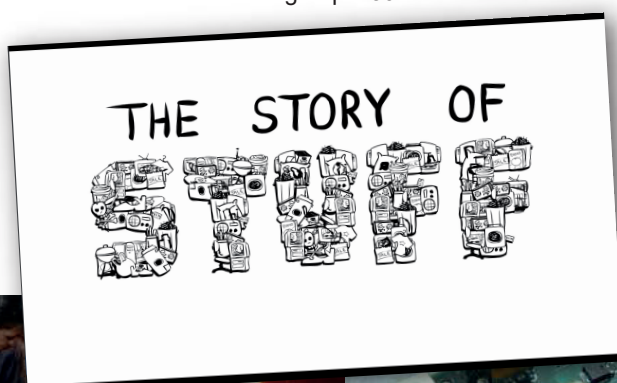
**Development:**

1. The students are divided into groups of roughly 4/5 people. 5 min.
2. Give each group the video to see. 20 min.
3. The groups share the different routes, stopping to discuss any differences in order between the groups. 30 min.

*Discussion:*

- Were you aware of the different steps involved in making a smartphone?
- Did you know the impacts associated with this process?
- How do you feel about these impacts?
- Do you think that the price of a smartphone reflects the costs of the entire process?
- How do we use our smartphones?
- How often do we buy new ones?

30 min



## RESOURCES FOR MORE INFORMATION



**Campaign website**

[www.tecnologia LibreDeConflicto.org](http://www.tecnologia LibreDeConflicto.org)



**Enough Conflict Minerals video (2018)**

[www.enoughproject.com](http://www.enoughproject.com)

<https://www.youtube.com/watch?v=6aJxFekSiPg>



**Regulatory Explanation:**

[https://ec.europa.eu/trade/policy/in-focus/conflict-minerals-regulation/regulation-explained/index\\_en.htm](https://ec.europa.eu/trade/policy/in-focus/conflict-minerals-regulation/regulation-explained/index_en.htm)



**News about e-waste dumps:**

<https://www.npr.org/2010/12/21/132204954/after-dump-what-happens-to-electronic-waste?t=1589304822555>



**The story of stuff Project:**

<https://www.storyofstuff.org/movies/story-of-stuff/>



**Low-cost electronics. Study of the working conditions of four DELL suppliers in China. (2013)**

<https://www.theatlantic.com/technology/archive/2016/09/the-global-cost-of-electronic-waste/502019/>

A project from:



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Cooperate:

