1.) Raw Materials

When people mine in an open mine pit for copper ore which is used to make copper there is a lot that happens and there is even a chemical change when the SiO₂ is burned the chalcopyrite which is CuFeS₂.

Here's the process

Chalcopyrite burned with SiO₂

This is a chemical change here we see the Chemical change of CuFeS₂ to Cu₂O due to the heat. In the above equation when a molecule is changed because new atoms are combined or new atoms are moved around.

The Process of Pure Copper

CuFeS₂ + O₂ + SiO₂ = Cu₂O + FeSiO₃ + SO₂

Pure copper was made

The reason there is a picture of a phone is because in Congo there is tantalum which is used for phones and Tantalum is bad to have so its not allowed to be in phones. War Lords used the money from selling tantalum for their army’s, to get advanced technology.

Tantalum

The reason that the phones were called, “blood phones” is because the tantalum which is inside of the phone is causing bloody wars. Therefore the phones are called “blood phones” for having the tantalum inside of the phone.

2.) Manufacturing

In a lab we also made circuit boards which is a part of a laptop but there are a lot of downsides to making our computers. The computer alone is bad for our environment.

The Etching solution which is CuCl₂ is mixed with one copper atom the CuCl₂ is broken up and then there is only CuCl and the other copper and the other Cl get mixed creating 2 CuCl total.

{CuCl₂} → CuCl + Cl₂

Circuit Boards

The computer chip has 40 kg of total waste and 3 kg of that is Hazardous while the circuit board has 21 kg total waste and 18 kg is Hazardous. This is telling us the waste created from manufacturing one computer alone which is a lot.

3.) Disposal

Still Disposal

The models show that there is a chemical change occurring because the molecule changed from CuCl₂ to ACCO because it was mixed with Aluminum which causes a chemical change. We are trying to mix it with Aluminum because we wanted to see if we could get some of the copper back that way we wouldn't pollute the environment with Hazardous waste.