

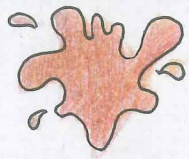
Hello there! I didn't notice you. I was just intensely examining this penny.

Did you know that 95% of the penny was made of copper?

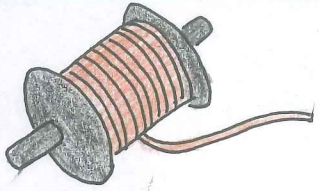


Copper...

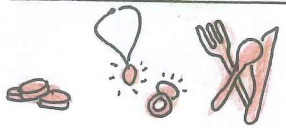
Is a reddish-gold colour.



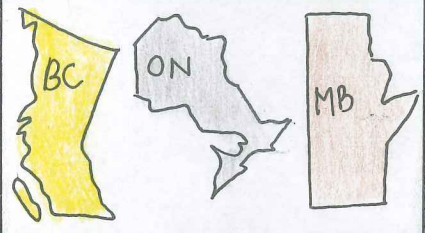
Can be made into wires easily which means it's ductile.



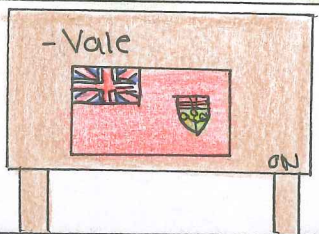
Can be used to make coins, jewelry, cookware and more.



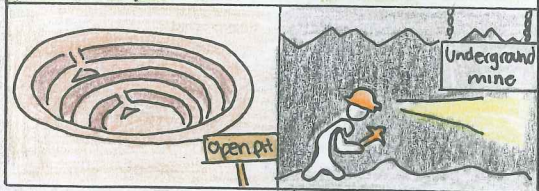
British Columbia produces the most copper in Canada, followed by Ontario, then Manitoba.



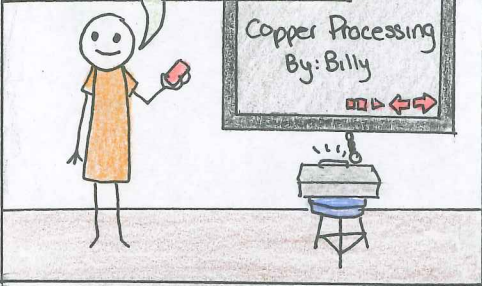
The Highland Valley mine in British Columbia is the largest open-pit copper mine in Canada. This mine is operated and owned by Tech resources. Another company called Vale produces copper in a lot of mines in Ontario.



The most common way to mine copper is open pit mining (extracting minerals and rocks from an open pit). For copper deeper underground, there is underground mining (extracts ore safely and producing little waste possible).



Let me show you the steps of processing copper with this powerpoint.



**1. Mining:** Copper ore is removed from the ground

**2. Grinding:** ore is crushed and ground into powder.

**3. Concentrating:** ore is enriched with process called Froth flotation. Unwanted material is removed.

★ Unwanted material is also known as gangue

**4. Roasting:** Heated to 500°C - 700°C to remove sulphur and dry ore.

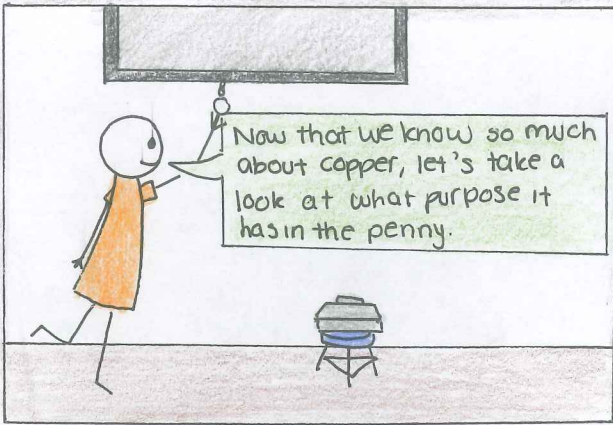
**5. Smelting:** Heated at 1200°C and melts. Some unwanted ores are removed as slag leaving matte (copper and iron sulphide liquid).

★ Slag: stony waste material separated from metals when smelting the ore.

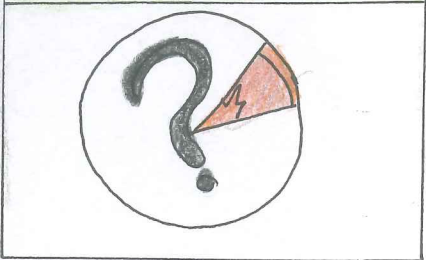
**6. Conversion:** Air is blown into the matte and creates blistered copper

↑ wire made of copper

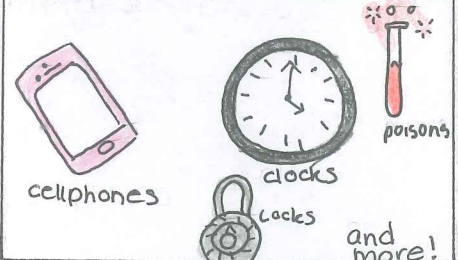
**7. electro refining:** purified to 99.99% Copper by electrolysis. Then sent off to become final product.



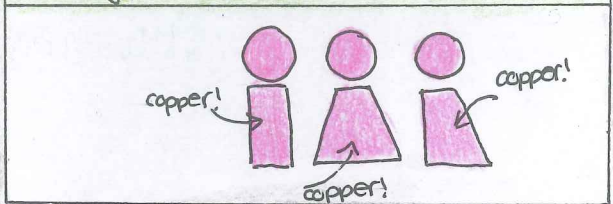
Copper is one of the binding materials of pennies, so without 95% of the product, it just doesn't exist.



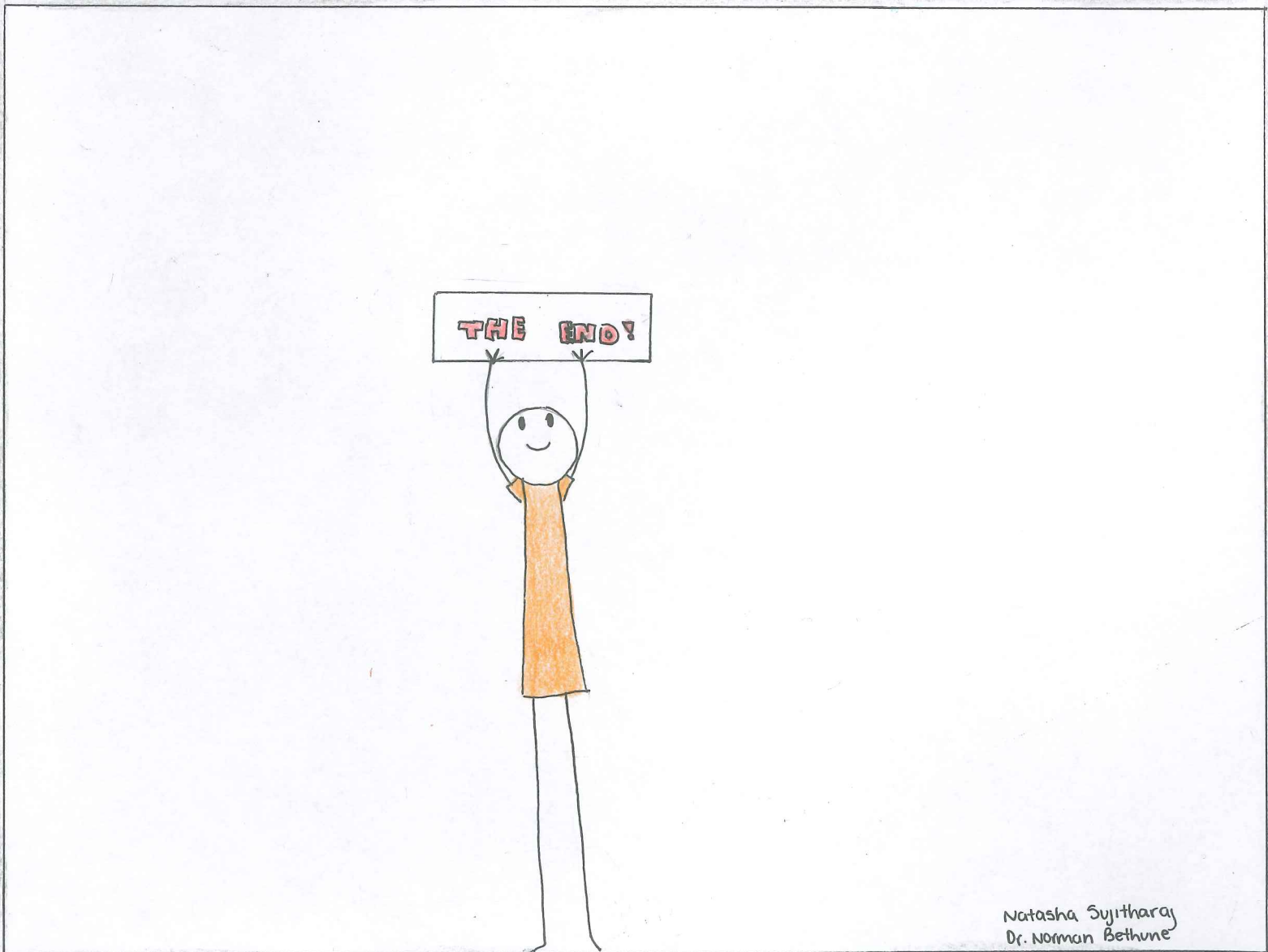
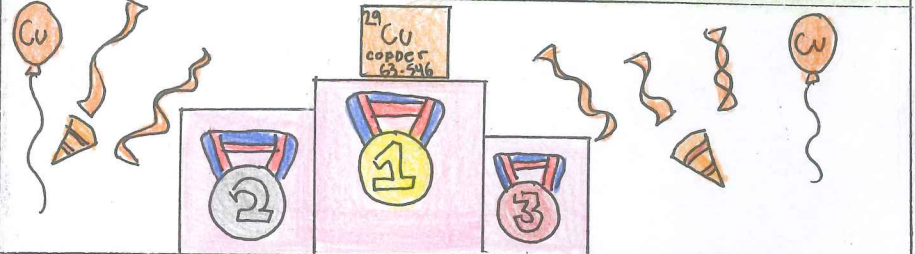
Not only would the penny have been affected without copper, but so many other objects that use this metal such as...



This is why copper is so important to our daily lives, but that's not it! Copper is also a mineral in the body that helps make red blood cells and keeps nerve cells and immune systems healthy!!!



Our beloved metal, copper, is something we literally cannot live without. It's unique colours and uses prove it's importance and worth on this planet.



Project Name: \_\_\_\_\_

Page: \_\_\_\_\_ of \_\_\_\_\_

By: Natasha

Date: Jan 30 2018

Appearance

- Characteristics (ductile)
- Cans, gun metals, wiring, motors, jewelry, costume

include pictures of examples

\* pics of examples \*

Explain what copper is and what it can be used for

\* The penny was 95% copper, so without it they just wouldn't be the penny \*

Purpose of copper in the penny

\* include map of Canada \*

\* include name and location of mines \*

where in Canada it is found

Why copper is important and what would happen without it

\* Explain open pit mining \*

\* include picture of an open pit mine \*

How it is extracted

\* 3 steps \*

\* This will take up multiple panels \*

\* 1 For each step maybe picture of one after each step? \*

processing

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