



WHAT on Earth is in your stuff?
WHERE on Earth does it come from?

What exactly is inside

Earphones?



By Ashley Ho



Electrical wiring



Aluminum



Bauxite ore

Aluminum makes up the small coil inside the earphone, that acts as a type of transducer turning raw data into audible sound.

Aluminum is the third most abundant element on earth after oxygen and silicon and the most abundant metal on the earth's surface. It cannot be found as its true state because it's too chemically reactive so it combines over many different minerals. The chief source of aluminum is bauxite ore.

Bauxite is the most important aluminum ore. Approximately 95% of the world's bauxite production is processed into alumina and then aluminium. It is mostly surface mined because it is found at the top of the earth's surface.

Top producers of *aluminum*:

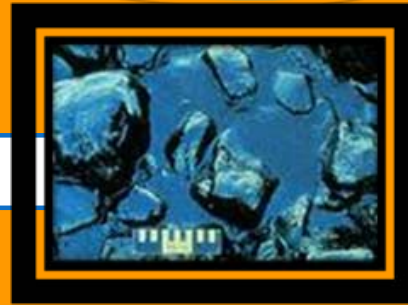
1. Guinea and Australia has 1/2 of the world's reserves!
2. Vietnam
3. Jamaica
4. Brazil
5. Guyana

Top producers of *bauxite ore*:

1. Australia
2. Brazil
3. China
4. Russia
5. India



Outer Shell



Hard plastic is used for the outer shell of the earphone and serves to protect the sensitive inner workings of the device.

Oil and gas can be converted to chemicals or rather called petrochemicals, the major material in plastics. Petroleum molecules, that has a lot of carbon and hydrogen atoms, are sorted, split, reassembled, and blended at refineries and petrochemical plants.

Top producers of *oil*:

1. Texas
2. California
3. United States of America
4. Russia
5. Saudi Arab
6. Iran and Iraq
7. Nigeria
8. Venezuela
9. And many more

Top producers of *plastic*:

1. Saudi Arabia
2. Russia
3. U.S.A.
4. Iran



TRS connector

It is a ductile metal with very high thermal and electrical conductivity.



Copper



Many TRS connectors, or "audio jacks," are made of copper. Copper is an excellent conductor for electricity.

Copper was probably the first metal used by man. The name comes from Cyprus, as copper was found in that island. Mixed with tin, it makes bronze, an extremely important metal before iron was in general use. The word "bronze" may come from "birinj", which is Persian for copper.

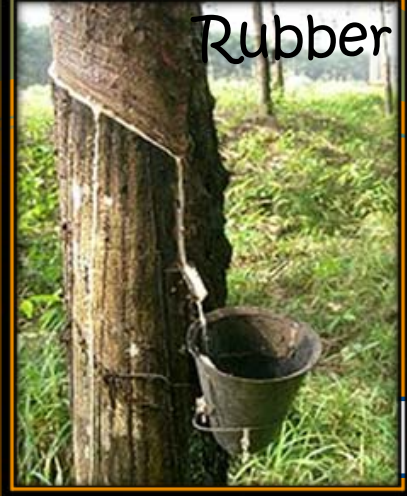
Native copper can be found in rock. The biggest ores of copper are the minerals chalcopyrite and malachite. Copper is mined throughout the world in the largest pit mines created.

Top producers of *copper*:

1. Chile,
 2. U.S.A.,
 3. Peru,
 4. China,
 5. Australia,
 6. Indonesia,
 7. Russia,
 8. Canada,
 9. Zambia.
10. Copper is found in many other countries as well, it's a pretty extensive list.
11. Trace amounts of copper can be found in our blood - it is an essential enzyme that helps the central nervous system.

Output in 2005 shown as a percentage of the top producer (Chile - 5,320,500 tonnes)

Rubber



Extra comfort



Newer earphones use rubber around the earphone speaker. This is used to add extra comfort for the user.

25-30% of natural rubber is taken from latex. Rubber latex is taken from rubber trees called *Hevea Brasiliensis*. The usual life of these trees is around 35 years. There is a cup is held by a wire wrapped around the trees with a spring so it can stretch while the tree grows.

Artificial rubber is made from petroleum which contains many carbon molecules that are chemically altered so they change into dienes, another type of molecules. These are then re-altered so they form a long chain of polymers.

Hundreds of thousands of workers spend hard working days taking out the rubber from their trees. An agent weighs, classifies and pays for it and then shipped out to industrial places.

Top producers of *rubber*:

Rubber was first found in the Amazon in Brazil and rubber cultivation was transferred to Southeast Asia where its most successful.

- 1.Asia
- 2.Brazil
- 3.South and Central America
- 4.Africa

Why This Is Important

Non renewable resources are natural resources which cannot be produced, re-grown, regenerated, or reused. Ever. These resources often exist in a limited amount, or are consumed much faster than nature can recreate them. Non-Renewable resources are important, in some cases even more important that renewable sources. One way that they are important is, they are a large component of the world's economy.

Non-renewable resources include Gold, Coal, Oil and other rare to semi-rare minerals that society needs. Gold is a major non-renewable resource, as it is a Global form of currency. Coal and oils are also Major in that they are currently the main resources used for electricity production, metal production etc. Without Non-renewable resources, the world's economy would be much smaller considering the fact that almost every country has some sort of resource to sell.



Bibliography

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-<http://en.wikipedia.org/wiki/Aluminium>
-<http://en.wikipedia.org/wiki/Metal>
-<http://en.wikipedia.org/wiki/Polymer>
-<http://en.wikipedia.org/wiki/Plastic>
-<http://en.wikipedia.org/wiki/Bauxite>
-http://en.wikipedia.org/wiki/Natural_gas
-http://en.wikipedia.org/wiki/Non-renewable_resource

-(these sites are where I found the pictures too)

But here are picture resources that are not found in the resources listed above.

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www.industryplayer.com/.../licrespic/bauxite.jpg
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