

Due date: _____

Name: _____

Mineral Treasure Hunt

On the internet, go to <http://www.minerals.net/minerals/a.aspx> . This is an on-line mineral encyclopedia. Click on the name of each mineral to learn about it. You can also check out the Mineral Information Institute web site — <http://www.mineralseducationcoalition.org/minerals> .

Look up the minerals below, and match the uses with the appropriate minerals.

- | | |
|---------------------------|---|
| _____ Apatite | A. Abrasive — this hard mineral makes a good abrasive. |
| _____ Asbestos | B. Construction — sheet rock (wallboard) is made of this mineral, which is also used to make plaster of paris. |
| _____ Barite | C. Construction — this mineral is used to make cement. |
| _____ Beryl | D. Cosmetics and personal products, such as baby powder, use this mineral. |
| _____ Borax | E. Electronics — this mineral is used to make electronic oscillators for watches, radios, etc. It is also a source for the silicon in computer chips. |
| _____ Calcite | F. Explosives — this mineral is used to make black powder (and rubber, which is used to make tires). |
| _____ Chalcopyrite | G. Fertilizer — this mineral is the main source for phosphorous. |
| _____ Corundum | H. Filters — this mineral makes good filters, and is used in such diverse things as cat litter and nuclear power plants. It's also used in water softeners. |
| _____ Galena | I. Food — this mineral is an essential “mineral” in our diet, and is also used to flavor food. |
| _____ Graphite | J. Heat and fire resistant materials, including roofing and vehicle brake pads. |
| _____ Gypsum | K. Industrial chemical — this mineral has dozens of uses in detergents, ceramics, glass, paper and welding flux. |
| _____ Halite | L. Industrial chemical — this mineral is used in the manufacture of glass and ceramics. |
| _____ Ice | M. Jewelry — this mineral is also known as the gemstones emerald & aquamarine. |
| _____ Orthoclase feldspar | N. Medicine — this mineral is used to make x-rays of the digestive system. |
| _____ Pyrite | O. Ore — this mineral is an ore of copper. |
| _____ Quartz | P. Ore — this mineral is an ore of lead. |
| _____ Sulfur | Q. Ore — this mineral is an ore of zirconium, hafnium and thorium. |
| _____ Talc | R. Pencils — this mineral is the “lead” in pencils, and it also makes a good lubricant. |
| _____ Zeolites | S. Tricks — since this mineral has a gold color, foolish people can be tricked into thinking it's really gold! |
| _____ Zircon | T. Useless — the natural mineral doesn't have any use, but artificial varieties of this mineral keep our beverages cold. |

Due date: _____

Name: _____

Now that you're an expert on minerals, let's focus on one specific use — **what minerals are needed to make your cell phone?** Google “minerals in your mobile device” to help you with this (look for the USGS web page).

Arsenopyrite is a source of _____ which is used in _____

Bastnaesite is a source of _____ which is used in _____

Bauxite (aluminum ore) is a source of _____ which is used in _____

Cassiterite is a source of _____ which is used in _____

Chalcopyrite is a source of _____ which is used in _____

Graphite is a mineral which is used in _____

Langbeinite (also sylvite, and sylvinite) are sources of _____ which is used in _____

Quartz (silica) is a source of _____ which is used in _____, and is also used in _____

Sphalerite (zinc ore) is a source of _____ and _____ which is used in _____ and _____

Spodumene is a source of _____ which is used in _____

Tantalite is a source of _____ which is used in _____

Tetrahedrite is a source of _____ which is used in _____

Wolframite is a source of _____ which is used in _____

Where are these minerals mined? Look at <https://pubs.usgs.gov/gip/0167/gip167.pdf>.

What two countries are leading sources of **industrial sand**? _____

What three countries are leading sources of **silver**? _____

Some countries are leading sources for more than one mineral. What country has more mineral resources than any other? _____

That's the end! I hope you enjoyed learning about mineral uses.