

# MINERALS AND THEIR USES



Minerals play a large part in our everyday lives. We use them for fuel, in construction, for art and personal decoration. We use them to build urban infrastructure and a huge variety of household objects. Plumbing and electricity are reliant on mineral resources. Transportation, agriculture and manufacturing are just a few of the industries which rely on these natural resources. Indeed, there isn't much that we could do without minerals, as they comprise the very environment in which we live.

One invention that couldn't exist without a wide array of different minerals is the smartphone. Smartphones use approximately 1/3 of all known naturally occurring metals for their parts—all in a much higher concentration than is found in nature. They utilize a large amount of rare earth metals and the continued extraction of these limited substances, as well as improper disposal of the phones' radioactive elements, is often cause for environmental and political concern.



**Malachite - copper ore**

The demand for minerals has led to the development of large mining industries to oversee their extraction. Canada lays claim to one of the largest in the world, and mining is considered an important economic sector. Rocks containing valuable minerals, often metals, are referred to as ore, and this is what is usually targeted by mining operations. Once extracted, the ore is shipped off to be processed and used to manufacture various products. Precious metals are those metals considered to be of incredibly high value, including gold, silver, and platinum.



## Did you know?

Hominins have been using minerals to make things ever since Homo Habilis learned to create tools 2 million years ago.

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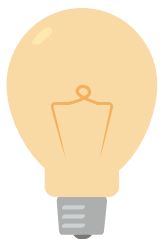


Look around your home. Anything that isn't organic, like wood, and hasn't been grown, has been mined. Your house is full of minerals! Metals, or metallic alloys, which are a combination of multiple metals, are the easiest to spot. They're often shiny, hard, and heavy for their size, and the most common ones are copper, aluminum, brass, and steel. But there are plenty of non-metallic minerals in your home as well. It's estimated that one person will use approximately 1.4 million kg of minerals in their lifetime.

**Did you know?** The small amount of chromium included in stainless steel is what keeps it from rusting.



On this page and the next **connect** the minerals to common household items that contain them!



GYPSUM



FLUORITE



ZINC

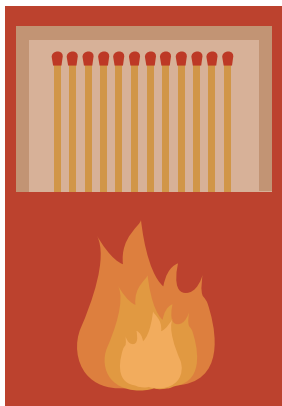
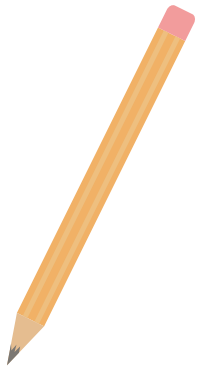
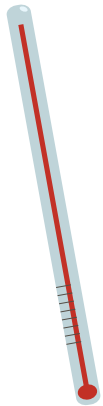


QUARTZ

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## ACTIVITY CONT.



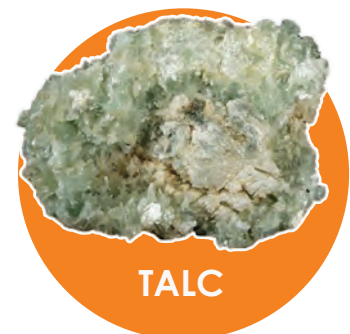
MERCURY



SULFUR



GRAPHITE



TALC



## ANSWER KEY

toothpaste- flourite

paint- gypsum

lightbulb- quartz

sunscreen- zinc

baby powder- talc

thermometer- mercury

pencil-graphite

matches-sulfur