

# ORES

An ore is a rock or mineral that has sufficient quantity of a metal to be extracted commercially.

Name of Ore	Metal Component	Uses
bauxite	aluminum	cookware, aircraft
cassiterite	tin	metal coatings, bronze, pewter
chalcopyrite	copper	wire, coins, bronze, brass, pewter
galena	lead	pipes, batteries, pewter, radiation protection
gold	gold	jewelry, coins
hematite	iron	steel for automobiles and buildings
pitchblende	uranium	nuclear fuel
silver	silver	jewelry, coins
sphalerite	zinc	galvanized iron, brass
wolframite	tungsten	lightbulb filaments, steels

## Questions:

1. Since 1982 pennies are no longer 95% copper. They have a thin copper coating. Why was this change made? What are pennies made of now?
2. Which of the metals in the chart above is the most abundant metal element in the Earth's crust?
3. Does the name Galena given to a town in Illinois have anything to do with the mineral Galena?
4. The purity of gold is often described in karats? What karat value is given to pure gold? Why isn't pure gold used to make jewelry?
5. Tungsten is an element on the periodic table. It has the symbol **W**. Why?
6. What is an alloy?