

# Topic Introduction



**Summarize your understanding of each paragraph.**

Element(s) often refers to the elements of chemistry, each a pure substance of one type of atom, which together make up all the matter in the universe. The periodic table of elements displays all of the elements and their defining attributes.

A chemical element is a species of atoms having the same number of protons in their atomic nuclei (i.e. the same atomic number, or  $Z$ ). There are 118 elements that have been identified, of which the first 94 occur naturally on Earth. The remaining 24 are synthetic elements.

When different elements are chemically combined, with the atoms held together by chemical bonds, they form chemical compounds. Only a minority of elements are found uncombined as relatively pure minerals.

Common native elements are copper, silver, gold, carbon (as coal, graphite, or diamonds), and sulfur. All but a few of the most inert elements, such as noble gases and noble metals, are usually found on Earth in chemically combined form, as chemical compounds.