

Definition

An element is a pure substance that cannot be separated into simpler substances by chemical or physical means.

Characteristics

- There are about 117 elements.
- Only a few elements make up the largest portion of Earth.

Element

Examples

Carbon
Oxygen
Nitrogen
Hydrogen

Non-Examples

Carbon Dioxide
Water
All Compounds

Definition

Matter that is comprised of (made up of) the same material throughout.

Characteristics

Pure substances have fixed physical and chemical properties.

Pure Substance

Examples

Distilled Water
Carbon
Oxygen

Non-Examples

Sea Water

Definition

An atom is the smallest part of an element.

Characteristics

- Its structure determines the unique properties of the element.
- An atom has a nucleus which is made up of protons and neutrons.
- All atoms of the same element have the same number of protons.

Atom

Examples

An atom of carbon.
An atom of oxygen.

Non-Examples

Molecule

Definition

The shortened version of the English or Latin name of an element.

Characteristics

- Are made up of one or two letters.
- The first letter is always capitalized. The second letter is always lower-case.

Chemical Symbol
(Atomic Symbol)

Examples

C

Al

Cu

Non-Examples

c

AL

cU