

element

Definition – substances that are the building blocks of all matter, made up of one kind of atom

Characteristics – simplest form of matter; cannot be broken down into simpler substances easily; each element has a set of unique physical and chemical properties, each element is made up of all the same atoms

Example – one lego block

Picture -

molecule

Definition – smallest particle of a substance that still has the properties of that substance

Characteristics – two or more atoms that are combined; just as an atom is the smallest particle of an element with the same properties of that element, a molecule is the smallest particle of a substance with the same properties of that substance

Example – O_2 , H_2O

Picture -

Chemical symbol

Definition – one- or two- letter code that stands for an element

Characteristics – abbreviated from the elements name which may be English, Latin or Greek; the first letter is always capitalized, the second letter if there is one is always lowercase

Example – O = oxygen, Fe = Iron

Picture -

Chemical formula

Definition – tells the kinds of atoms and how many of each kind are in a compound or molecule

Characteristics – molecules and compounds are represented by a combination of chemical symbols and numbers, the small number tells the number of atoms present

H² means there are two atoms of hydrogen in the compound

Example – C₆H₁₂O₆

Picture -

Periodic table

Definition – an arrangement of elements in order of their atomic numbers

Characteristics – chart where elements are arranged by their properties

Example – chart

Picture -

compound

Definition – substance made up of two or more elements chemically combined

Characteristics – a compound cannot be separated by physical means; its properties are different from the elements that make it up

Example – H₂O

Picture -

Chemical Bond

Definition – force of attraction that holds together the atoms in a compound

Characteristics – this bond is like the attraction between two magnets, you cannot see it, but you cannot take it apart easily

Example – Force

Picture -

Atom

Definition - The smallest unit of an element that has all of the properties of that element

Characteristics – All the atoms in an element are exactly the same, atoms make up everything in the universe

Example – minuscule objects

Picture -