

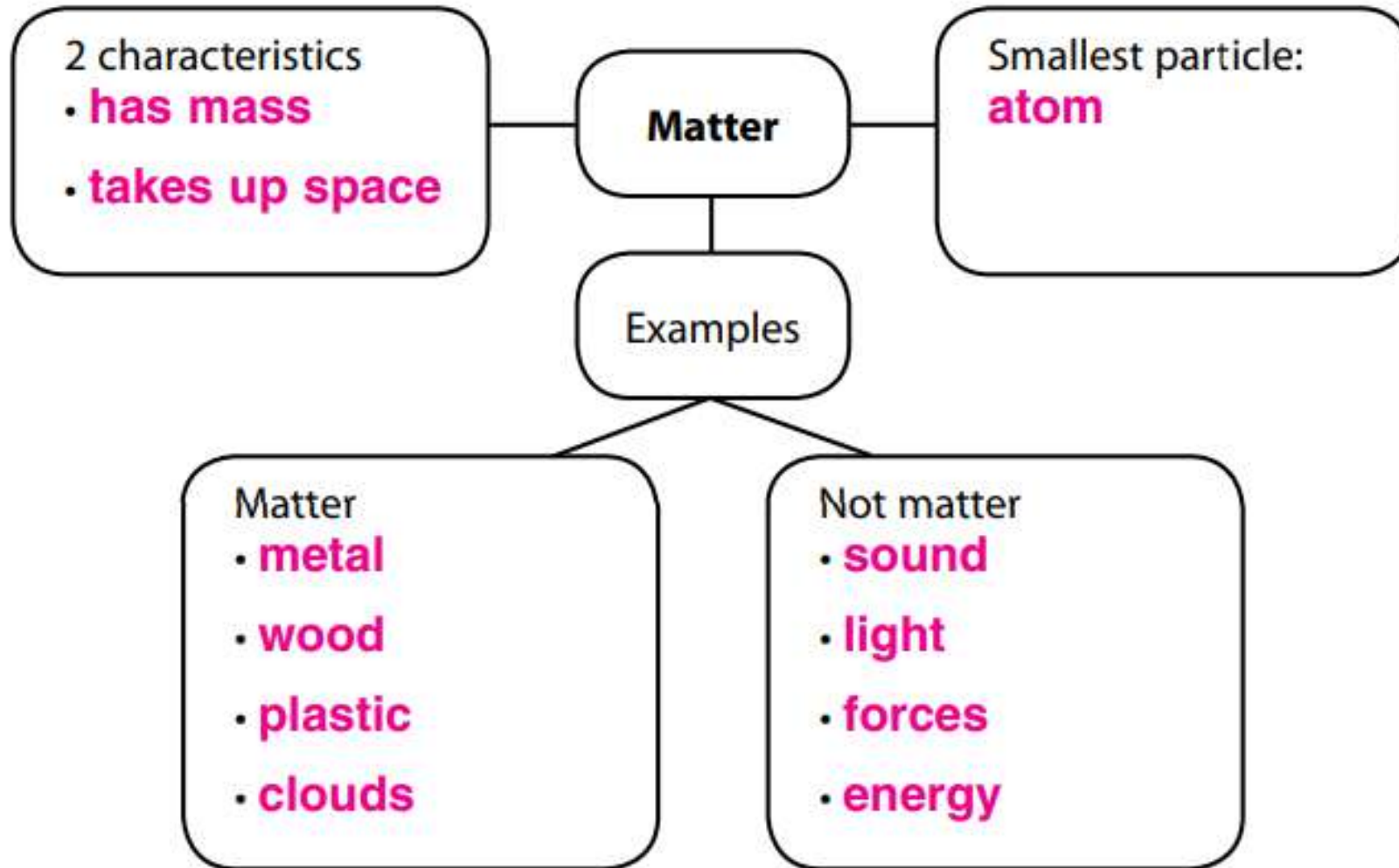


Chapter #7: Foundations of Chemistry

Lesson #1: Classifying Matter



 **Organize** *information about matter.*

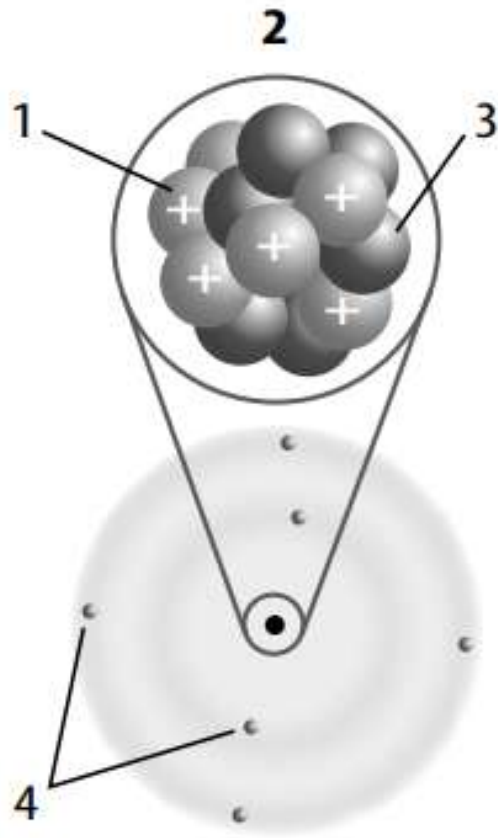


LETTERS

MATTER

MATTERS

Identify and describe *the parts of an atom.*



1. proton – positively charged particle
in the nucleus
2. nucleus – the protons and neutrons
in the atom's center
3. neutron – particle with no charge in
the nucleus
4. electrons – negatively charged
particles moving in the electron
cloud

Chemistry

PARTS OF AN ATOM



Relate *the number of protons in the nucleus of an atom to the properties of matter.*

The number of protons determines the type of atom and the properties in the matter made up of that type of atom.

 **Define** *substance, and identify two examples.*

Definition: **matter with a composition that is always the same**

Examples: **elements and compounds**



Examine *how atoms of elements differ. Circle the characteristic that gives each type of atom its unique properties.*

Example	Aluminum	Oxygen
Is it a substance?	yes	yes
Is it an element?	yes	yes
How many protons are in its nucleus?	13	8
How do its atoms usually exist?	individually	in pairs

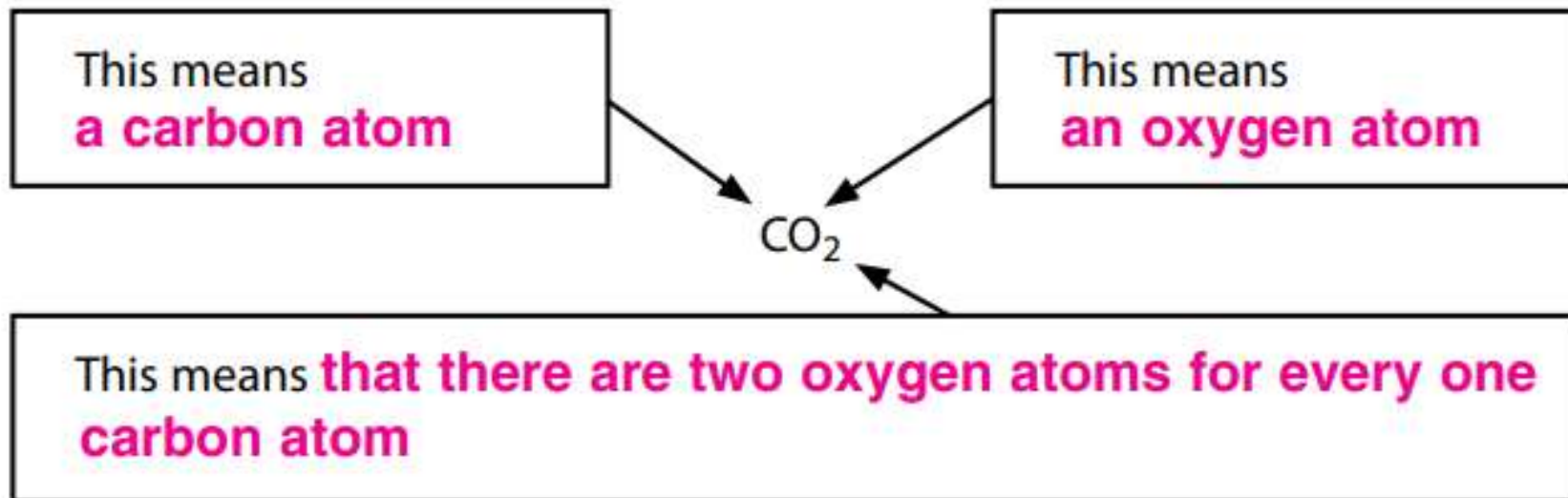
Differentiate elements *from* compounds.

Element	Compound
a substance that consists of just one type of atom	a substance containing atoms of two or more different elements chemically bonded together

ELEMENT VS COMPOUND



Interpret *the chemical formula.*

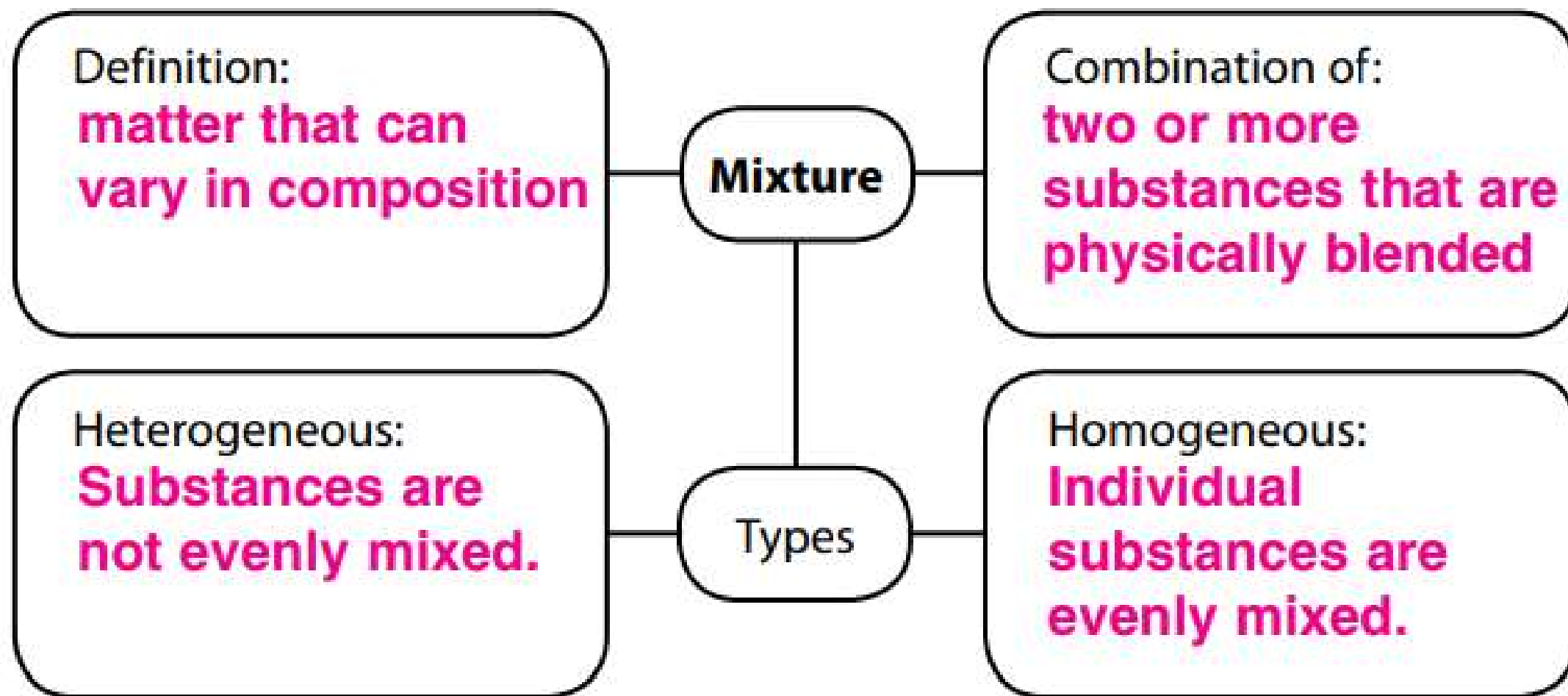


Relate *properties of a compound to the properties of the elements of which it is made.*

A compound often has different properties from the individual elements that compose it.



Organize *information about mixtures.*




Complete *the statement to describe how a substance dissolves.*

In a solution, the solvent is the substance
present in the largest amount; the solutes are all
the other substances that dissolve in the solvent.

Explain *whether a chemical formula can describe a solution.*

A chemical formula cannot be use to describe a solution

because a solution's composition can vary.

 **Order** the classifications of matter. Use the words in the box to make a sequence that is true.

