



Topic/Objective CHAPTER:

NAME:

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DATE

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Chemistry

Essential Question

What are Elements; Compounds/Mix

Cue: Review:
Thoughts: Main Idea

NOTE Taking AREA:

Matter

classified

matter present in our surroundings can be classified as:

Pure

Substance

Pure Substances & Mixtures

Elements & Compounds

Elements

- ↳ is a pure substance made of only 1 kind of Atom; simplest form of matter
- ↳ cannot be broken down into simpler substance by physical or chemical means
- ↳ held together by bonds
- ↳ see Periodic table
 - ↳ 92 natural elements arranged by their Atomic Number [Atomic #]
- ↳ is the # of protons⁺ in the nucleus
 - ↳ Broken into: METALS & NON METALS
 - ↳ some elements act like both and are classified as Metalloids

Compounds

- ↳ is a pure substance composed of 2 or more different elements

NOTES CONTINUE ON OTHER SIDE



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NOTE Taking AREA:

Properties differ between compound & Elements

Elements react chemically & form chemical bonds b/t them.

Compounds Compounds are classified into Ionic & Covalent or molecular compounds

Ionic Compounds Ionic compounds are held together by opposite charge attraction
 $\text{Na}^+ \text{Cl}^-$

Covalent compounds Covalent compounds are held together by sharing electrons



Mixtures

↳ mixture is a combination of 2 or more substances which are not chemically the same and DO NOT chemically react together.

↳ It DOES have the same properties as that of its component elements & can be separated by physical means.

↳ Classified in 2 ways

1.) Homogeneous

2.) Heterogeneous



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Essential Question

What are Elements Compounds Mix

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NOTE Taking AREA:

Classification
of Mixtures

mixture are classified in 2 ways:

Homogeneous
SolutionsHeterogeneous
Solutions↳ has the same
uniform appearance
& composition throughout.

Suspension Colloids

↳ often called: Solution

↳ classified based on the
solvent & the solute

Liquid in liquid

Solid in Liquid

gas in liquid i.e. soda water

↳ mixture of 2 or more substance in a
single phase

Solution

2 mixes

Solvent: substance in the largest Amount

Solute: substance in the smallest Amount

↳ Classified as either Suspension or Colloids

Suspension

Suspension is a mixture of large particles
where the particles DO NOT dissolve
but suspended throughout.
i.e. muddy water

Colloids

colloids are also heterogeneous Mixtures
but they appear like a homogeneous mixture
i.e. Milk

NOTES CONTINUE ON OTHER SIDE

(over)



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NOTE Taking AREA:

colloid particles size are smaller than 10^{-5}cm and uniformly distributed throughout the solution.

Can not be seen with naked eye but can with an electron microscope.

To see the particles use a beam of light the light scattering effect shown by particles in a colloid is known as:

Tyndall Effect
[Tin-dall]

SUMMARY: