
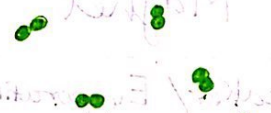

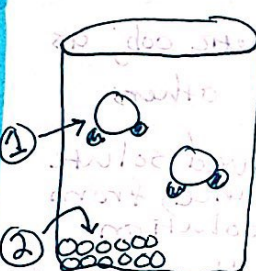


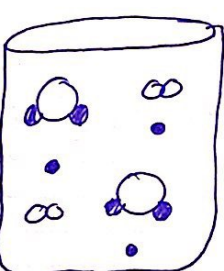


Name:

Date:

Pd:

Basic Classification of Matter in Chemistry - Honors

Elements	Heterogeneous Mixtures
<p>Made up of: <u>Atoms (same type)</u></p> <p>Chemically Bonded? <u>Yes or No</u> <u>Kinda</u></p> <p><u>Single *</u></p>  <p>Ex: Carbon (C) Sodium (Na)</p> <p><u>Double (Diatomic)</u></p>  <p>Ex: Oxygen (O_2) Chlorine (Cl_2)</p> <p><i>Ozone</i> </p>	<p>Made up of: <u>Pure Substances</u></p> <p>Chemically Bonded? Yes or <u>No</u></p>  <p>Unevenly mixed or insoluble (can't dissolve)</p> <p>Ex: Oil/Water; Sand/H_2O</p>
Compounds	Homogeneous Mixtures (Solutions)
<p>Made up of: <u>Atoms (different types)</u></p> <p>Chemically Bonded? <u>Yes</u> or No</p>  <p>Ex: Carbon monoxide (CO)</p> <p>1 Carbon 1 oxygen</p>  <p>Ex: Water (H_2O)</p> <p>2 Hydrogens 1 oxygen</p>	<p>Made up of: <u>Pure substances</u></p> <p>Chemically Bonded? Yes or <u>No</u></p>  <p>Evenly mixed or fully dissolved</p> <p>Ex: Salt water, Milk</p>

Pure Substances

(H₂O, H₂)

Name:

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Pd:

Techniques for Separating Mixtures:

Technique:	Used to Separate...	Equipment Needed:	Example:
Filtration	Insoluble solids from liquid/solution	Beakers(2), filter paper, funnel	Mixture of Sand and Water
Magnetism	Magnetic objects from others	Magnet	Mixture of Iron and Sand
Evaporation	Dissolved solute (substance) from a solution	Beaker/ Evaporating dish, Heat Source	Solution of Salt and Water
Distillation	Two liquids w/ different boiling points	Distillation apparatus	Mixture of two liquids with different boiling points

Practice:

1. Classify each material below as a pure substance or a mixture. If it is a pure substance, classify it as either an element or a compound. If it is a mixture, classify it as either a homogeneous mixture (solution) or a heterogeneous mixture and identify how you could separate the pure substances!

Material	Pure Substance or Mixture?	Additional Classification / Separation Techniques
Table salt (NaCl)	PS	C X
Block of Iron (Fe)		
Water and Copper cubes (Cu)		
(C ₆ H ₁₂ O ₆) Sugar water		
Water and Rubbing Alcohol		

(C₃H₇OH)