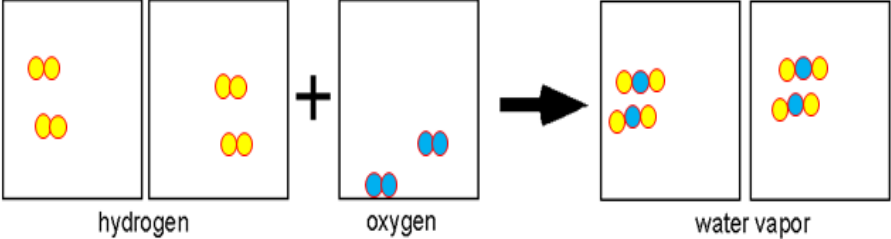


Unit 4 – Describing Substance Study Guide

1. Heterogeneous	
2. Homogeneous	
3. Solution	
4. Mixture	
5. Pure Substance	
6. Solubility, soluble , insoluble	
7. Distinguish between a pure substance and a mixture by properties	
8. Describe some physical separation techniques and what “phases” are being separated.	Distillation: Filtration:
9. Describe how to use characteristic properties (solubility, melting point, boiling point, density, etc.) to separate the components of a mixture: <ul style="list-style-type: none"> Identify the separation method and identify the property used in that separation method 	Distillation: Filtration:
10. Element	
11. Compound	

12. Atom	
13. Describe the differences between elements and compounds	
14. State Avogadro's Hypothesis (AH) and the evidence that led to this hypothesis.	<p>Equal volumes of gases (at same P & T) have equal # of molecules (or particles) .</p> <ul style="list-style-type: none"> Some pure elemental gases are clustered into pairs to form diatomic molecules <p>Gases reacting in small whole # ratios, P & n proportional</p>
15. Use AH along with combining volumes of gases to deduce the composition of some compounds	
16. Explain how to balance a chemical equation. Using an example $\text{___ N}_2 + \text{___ H}_2 \rightarrow \text{___ NH}_3$ <p>Coefficients:</p> <p>Subscripts:</p>	
17. State the Law of Definite Proportion and give an example.	
18. Law of Multiple Proportions and give an example	
19. State features of Dalton's model of the atom.	
20. Diatomic element or diatomic molecule	