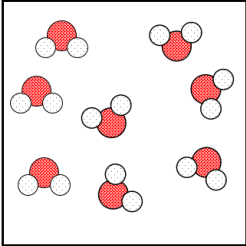
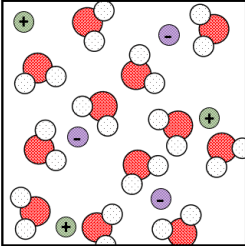
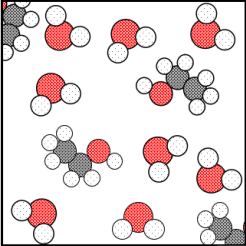


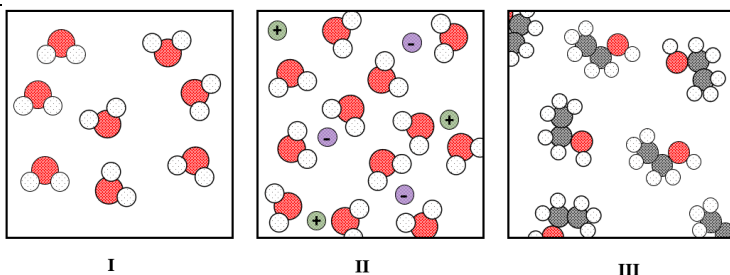
Faculty Submitting: Allison Kelly

Specify here whether "Pre" or "End" of Unit and the Unit #: Pre Unit 2

LOs: Distinguish elements from compounds, pure substances from mixtures, homogeneous from heterogeneous mixtures (solutions), and physical from chemical properties  
Write formulas and names for elements, cations and anions, oxoacids, and ionic and covalent compounds  
Describe the properties of protons, neutrons, electrons, atoms, ions and isotopes

Unit 2_ Question 1	Canvas Question Type: Multiple Choice <b>QUESTION GROUP</b>
1a	<p>Which of the following represents a mixture?</p> <div style="display: flex; justify-content: space-around; align-items: center;"><div style="text-align: center;"><p><b>I</b></p></div><div style="text-align: center;"><p><b>II</b></p></div><div style="text-align: center;"><p><b>III</b></p></div></div> <p>ALT TEXT: There are three boxes representing a microscopic system. The box labelled I has only water molecules in it. The box labelled II has water molecules, anions and cations. The box labelled III has water molecules and ethanol molecules.</p>
	<p>Correct Answer: II and III</p> <p>Wrong Answers: Only I Only II Only III I and II I and III</p>
1b	Which of the following represents a pure substance?

Commented [KMA1]: Idea for future Allison: similar question format but with element vs compound



ALT TEXT: There are three boxes representing a microscopic system. The box labelled I has only water molecules in it. The box labelled II has water molecules, anions and cations. The box labelled III has water molecules and ethanol molecules.

Correct Answer: Only II

Wrong Answers:

Only I  
Only III  
II and III  
I and II  
I and III

Read More <https://openstax.org/books/chemistry-2e/pages/1-2-phases-and-classification-of-matter>

Unit 2\_ Question 2 Canvas Question Type: Multiple Fill in the Blank

Elements cannot be broken down by [chemical] changes. [Compounds] are pure substances made of two or more elements.

Read More [https://openstax.org/books/chemistry-2e/pages/1-2-phases-and-classification-of-matter#CNX\\_Chem\\_01\\_02\\_MattType](https://openstax.org/books/chemistry-2e/pages/1-2-phases-and-classification-of-matter#CNX_Chem_01_02_MattType)

Unit 2\_ Question 3 Canvas Question Type: Multiple Answers  
QUESTION GROUP

3a Which of the following are physical properties?

Correct answers:  
Density  
Melting point  
Hardness

	<p><b>Wrong Answers:</b>          Toxicity          Acidity          Flammability</p>
3b	Which of the following are chemical properties?
	<p><b>Correct answers:</b>          Toxicity          Acidity          Flammability</p> <p><b>Wrong Answers</b>          Density          Melting point          Hardness</p>
Read More	<a href="https://openstax.org/books/chemistry-2e/pages/1-3-physical-and-chemical-properties">https://openstax.org/books/chemistry-2e/pages/1-3-physical-and-chemical-properties</a>
<b>Unit 2_</b> <b>Question 4</b>	<b>Canvas Question Type: Matching</b>
	Atomic Number: The number of protons in an atom Mass Number: The number of protons and neutrons in an atom Atomic Mass: The mass of an atom
Read More	<a href="https://openstax.org/books/chemistry-2e/pages/2-3-atomic-structure-and-symbolism">https://openstax.org/books/chemistry-2e/pages/2-3-atomic-structure-and-symbolism</a>
<b>Unit 2_</b> <b>Question 5</b>	<b>Canvas Question Type: Fill in Multiple Blanks</b>
	According to Dalton's Postulates  A compound consists of [atoms] of two or more elements combined in a small, [whole]-number ratio. For a given compound, the atoms are always present in the same [ratio].
Read More	<a href="https://openstax.org/books/chemistry-2e/pages/2-1-early-ideas-in-atomic-theory">https://openstax.org/books/chemistry-2e/pages/2-1-early-ideas-in-atomic-theory</a>
<b>Unit 2_</b> <b>Question 6</b>	<b>Canvas Question Type: Matching</b>
	Match the laws to their definitions  Law of Constant Proportions – The elements of a compound are present in fixed proportions  Law of Conservation of Mass – Mass is neither created or destroyed
Read More	<a href="https://openstax.org/books/chemistry-2e/pages/2-1-early-ideas-in-atomic-theory">https://openstax.org/books/chemistry-2e/pages/2-1-early-ideas-in-atomic-theory</a>

<b>Unit 2_</b> <b>Question 7</b>	<b>Canvas Question Type: Multiple Choice</b> QUESTION GROUP
<b>7a</b>	Which of the following was the result of J.J. Thompson's Cathode Ray Experiment?
	Correct Answer: Observed electrons and determined the charge to mass ratio  Wrong Answers: Demonstrated the existence of the nucleus of the atom Determined the charge on the electron
<b>7b</b>	Which of the following was the result of R.A. Millikan's Oil Drop Experiment?
	Correct Answer: Determined the charge on the electron  Wrong Answers: Observed electrons and determined the charge to mass ratio Demonstrated the existence of the nucleus of the atom
<b>7c</b>	Which of the following was the result of Rutherford's Gold Foil Experiment?
	Correct Answer: Demonstrated the existence of the nucleus of the atom  Wrong Answers: Observed electrons and determined the charge to mass ratio Determined the charge on the electron
Read More	<a href="https://openstax.org/books/chemistry-2e/pages/2-2-evolution-of-atomic-theory">https://openstax.org/books/chemistry-2e/pages/2-2-evolution-of-atomic-theory</a>
<b>Unit 2_</b> <b>Question 8</b>	<b>Canvas Question Type: Multiple Drop Downs</b>
	Isotopes are atoms that contain the same number of [dropone] but different numbers of [droptwo]  DropOne Correct Answer: protons  Wrong Answers: electrons, neutrons  DropTwo Correct Answer: neutrons Wrong Answers: protons, electrons
Read More	<a href="https://openstax.org/books/chemistry-2e/pages/2-3-atomic-structure-and-symbolism">https://openstax.org/books/chemistry-2e/pages/2-3-atomic-structure-and-symbolism</a>
<b>Unit 2_</b> <b>Question 9</b>	<b>Canvas Question Type: Multiple Choice</b>

**Commented [KMA2]:** Could eventually build this out into a question group

**Commented [KMA3]:** Removed this question because of difficulty and because I actually wrote 11 questions instead of 10

	<p>For which of the following compounds is the empirical formula the same as the molecular formula?</p> <p>Correct Answer: <math>C_2H_6O</math></p> <p>Wrong Answers:  <math>C_6H_{12}O_6</math>  <math>C_6H_{14}</math>  <math>N_2O_2</math></p>
Read More	<a href="https://openstax.org/books/chemistry-2e/pages/2-4-chemical-formulas">https://openstax.org/books/chemistry-2e/pages/2-4-chemical-formulas</a>
<b>Unit 2_</b> <b>Question 10</b>	<b>Canvas Question Type: Multiple Answers</b>
	<p><b>Which of the following are true for ionic compounds?</b></p> <p>Correct Answers:  Composed of a metal and a nonmetal  Solids with high melting temperatures  Conduct electricity when melted  Formed by transferring electrons</p> <p>Wrong Answers:  Formed by sharing electrons</p>
Read More	<a href="https://openstax.org/books/chemistry-2e/pages/2-6-ionic-and-molecular-compounds">https://openstax.org/books/chemistry-2e/pages/2-6-ionic-and-molecular-compounds</a>
<b>Unit 2_</b> <b>Question 11</b>	<b>Canvas Question Type: Multiple Drop Downs</b>
	<p>An anion has [dropone] electrons to become [droptwo] charged  A cation has [droptthree] electrons to become [dropfour] charged</p> <p>Drop One  Correct Answer: gained  Wrong Answer: lost</p> <p>DropTwo  Correct Answer: negatively  Wrong Anwer: positively</p> <p>DropThree  Correct Answer: lost  Wrong Answer: gained</p>

	DropFour Correct Answer: positively Wrong Answer: negatively
Read More	<a href="https://openstax.org/books/chemistry-2e/pages/2-3-atomic-structure-and-symbolism">https://openstax.org/books/chemistry-2e/pages/2-3-atomic-structure-and-symbolism</a>
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