

Unit 5 EOC Concepts

1. Bond Comparison

Fill in the chart for a detailed comparison of an ionic and covalent bond

	Ionic bond	Covalent bond
Type of elements that form the bond	Metal & nonmetal	nonmetal
END	high	low
Form ions?	yes	no
Transfer or share Valance electrons	Transfer	Share

2. Compound Comparison

Fill in the chart with a comparison of ionic versus covalent compounds

	Ionic compound	Covalent compound
State at room temp	solid	Gas / liquid
High or low Boiling points	high	low
High or low melting points	high	low
Conduct electricity in pure state?	no	no
Conduct electricity when dissolved in water?	yes	no
Brittle?	always	generally not

3. Phase change comparison

Show at the particulate level what happens when an

Ionic solid melts

Molecular solid melts

NOTE: failure to draw a correct particulate level drawing will result in a zero for this unit

Ionic:

Internal ionic bonds Broken
Freeing ions, allowing conduction of electricity
Weak external attractions broken

molecule intact
no conduction of electricity