

Name: _____

Date: _____

Notes: Metallic Bonding

Ionic and Covalent Bonds

What happens to the electrons of *metals*? _____

What happens to the electrons of *nonmetals*? _____

What does this interaction create? _____

How do ions arrange themselves? _____

What does sharing electrons create? _____

Why don't covalent molecules come apart as easily as ionic salts?

Which type of bond is stronger: ionic or covalent? _____

How do covalent compounds arrange themselves? _____

Are the interactions between molecules strong or weak? _____

Metallic Bonding

What happens to the valence electron shells of metal atoms in a sample of metal?

What happens to valence electrons in metals? _____

How does metallic bonding compare to ionic and covalent bonds?

What do *delocalized electrons* respond to easily? _____

What property does this give metals? _____

How does heat affect the electrons' motion? _____

What does the *lattice structure* of metals allow to happen very well inside of a metal.

What property do these facts give metals? _____

What is not between two metal atoms? _____

What property do these facts give metals? _____

Define *malleable*: _____

Define *ductile*: _____

What is an *alloy*? _____

What does mixing metals affect? _____

What are some examples of alloys? _____

How are metals put into or separated from an alloy? _____

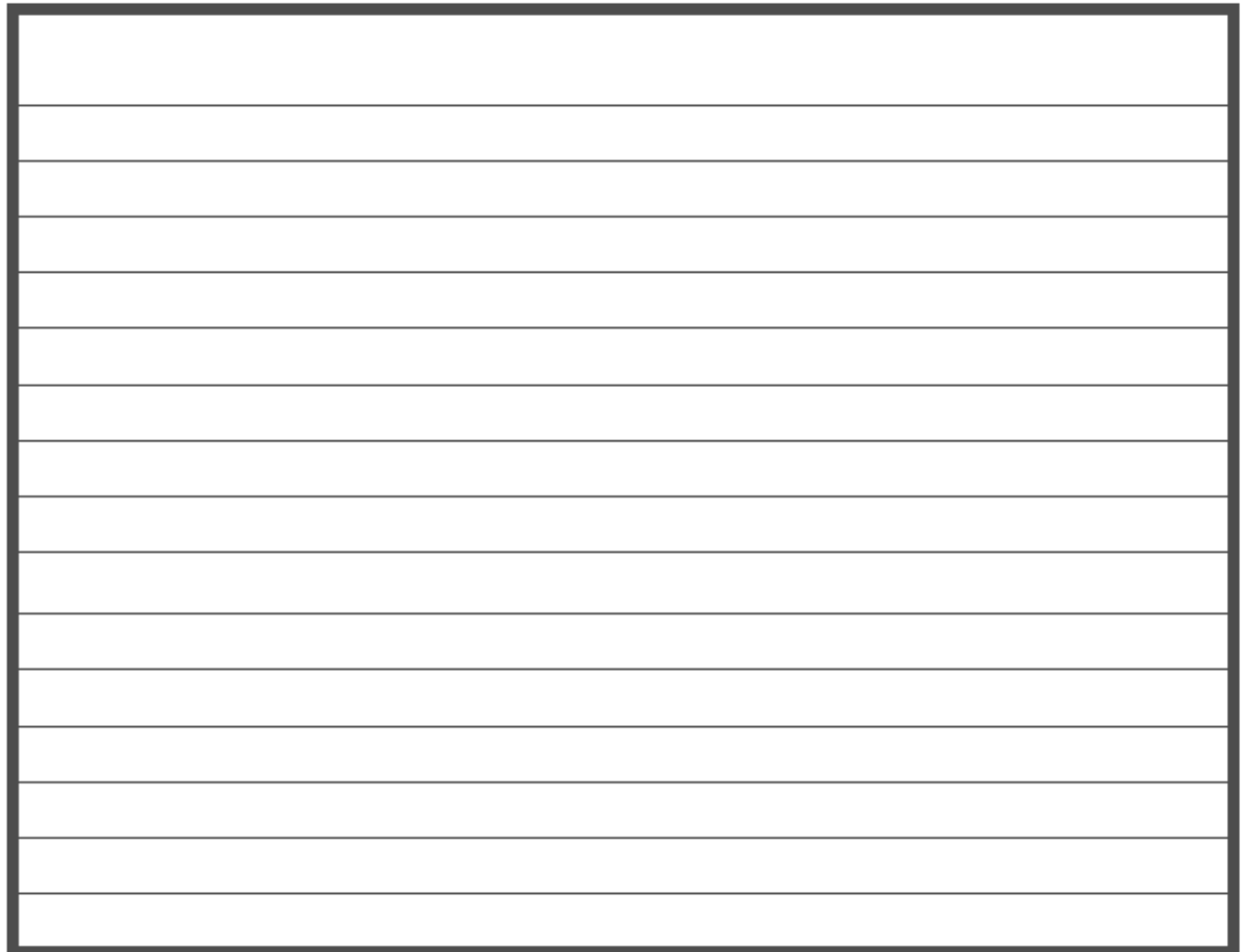
Is melting a physical or a chemical change? _____

What type of mixture are alloys? _____

Define ***molten***: _____

**Explain how the properties of metals are related to the nature of metallic bonding.
Be sure to cite examples in your explanation.**

Chicken Foot



STUDENTS MAY NOT WRITE OUTSIDE THE BOX

This box has been reduced in size from the standard 26 lines, but it should be sufficient for this assignment.