5.2 Note Guide

Ionic Bonding

-Definition:

Ex. Sodium chloride

Salt

-Definition:

-Electrically \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ionic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ made of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ held together by ionic bonds in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ratio

Energy Changes

-Ionization energy:

-5 steps of salt formation

 1.

 2.

 3.

 -

 4.

 5.

 Lattice Energy

 -Definition:

 -Released when:

Energy is released when:

Energy must be supplied to:

Ionic Compounds

 -Have no:

 -Don not consist of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 -\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ form ionic compounds

Ionic bonds are strong

-Cations and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ attract

-Attractive forces are:

Properties of ionic compounds

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-Ionic solids are not \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-When salt dissolves:

-Hard:

-Brittle:

 -Ions in crystal are arranged in:

-Layers positions so cation is next to an anion. Strong \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ forces \_\_\_\_\_\_\_\_\_\_\_ motion

-Takes lots of energy to:

-Cleavage plane:

Salt Crystals

-Crystal lattice definition:

-Unit cell definition: