Lewis Diagrams and Ionic Bonding Note: Online Textbook

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**Valence Shell –**

Chemical interactions are exchanges of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and the only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that are free to react with others are the ones in the valence shell.

**Lewis Dot Diagrams:**

Examples:

Nitrogen

Neon

Lithium

Chlorine

Flourine

**Ion Formation**

Electron shells have a preference to be \_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_. In between is considered \_\_\_\_\_\_\_\_\_\_\_.

An element will “give” their extra electrons away if it is a \_\_\_\_\_\_\_\_\_\_\_\_\_:

**Calcium Strontium**

Element Ion Element Ion

**Scandium**

Element Ion

An element with “take” extra electrons if it is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:

**Flourine Nitrogen**

Element Ion Element Ion

**Oxygen**

Element Ion

If an element gives away, or loses electrons, it gains a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ charge.

If an element takes, or gains electrons, it gains a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ charge.

**Multivalent:**

**Ionic Bond:**

Examples

Magnesium and Oxygen Sodium and Chlorine

Calcium and Flourine Potassium and Nitrogen