

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**ELECTRON DOT STRUCTURES**

**C405 Chemistry**

**Part 1 Write the number of valence electrons and show the dot structure for each element.**

| Element    | # Valence Electrons | Dot Structure | Element     | # Valence Electrons | Dot Structure |
|------------|---------------------|---------------|-------------|---------------------|---------------|
| Hydrogen   |                     |               | Sulfur      |                     |               |
| Helium     |                     |               | Chlorine    |                     |               |
| Lithium    |                     |               | Argon       |                     |               |
| Beryllium  |                     |               | Potassium   |                     |               |
| Boron      |                     |               | Calcium     |                     |               |
| Carbon     |                     |               | Scandium    |                     |               |
| Nitrogen   |                     |               | Titanium    |                     |               |
| Oxygen     |                     |               | Vanadium    |                     |               |
| Fluorine   |                     |               | Chromium ** | 1                   |               |
| Neon       |                     |               | Manganese   |                     |               |
| Sodium     |                     |               | Iron        |                     |               |
| Magnesium  |                     |               | Cobalt      |                     |               |
| Aluminum   |                     |               | Nickel      |                     |               |
| Silicon    |                     |               | Copper **   | 1                   |               |
| Phosphorus |                     |               | Zinc        |                     |               |

\*\*exceptions

**Part 2- Show the electron dot diagrams for these reactants and compounds**

| Lithium Chloride   | Magnesium Oxide  |
|--|--|
| $\text{Li} + \text{Cl} \rightarrow \text{Li} \text{ Cl}$ | $\text{Mg} + \text{O} \rightarrow \text{Mg} \text{ O}$ |

**Part 3- INFERENCES AND RELATED QUESTIONS**

1. Look at the electron dot structures for hydrogen, lithium, sodium and potassium. What similarity do you see?
2. Based on question #1, draw the dot structure for rubidium and relate to periodic trends.
3. Look at the electron dot structures for lithium, beryllium, boron, carbon, nitrogen, oxygen, fluorine, and neon. Can you identify a trend? If so, describe it.
4. How do your findings from question #3 relate to periodic trends?