

Day 1 – Monday 11/4

Valence Electrons in s and p Elements

Directions: Use the periodic table to determine how many valence electrons each element has.

Element	Type	Valence Electrons =
Na	s-block	—
Mg	s-block	
Al	p-block	
Si	p-block	
P	p-block	
Cl	p-block	
Ar	p-block	

Follow-up Question:

What pattern do you notice as you move left to right across a period in the s and p blocks?

Day 2 – Tuesday 11/5

Noble-Gas Shorthand and Valence for d and f Elements

Directions: Write the noble-gas shorthand electron configuration for each element and state how many valence electrons it has.

Element	Type	Noble-Gas Shorthand	Valence e ⁻
Fe	d-block		
Cu	d-block		
Ag	d-block		
W	d-block		
U	f-block		

Day 3 – Wednesday 11/6

Matching Lewis Dots to Shorthand Configurations

Directions: Match each **Lewis-dot diagram** (A–E) to its corresponding **shorthand electron configuration** below. Some of these do not match your maps/periodic table so add the electrons.

$\begin{array}{c} \bullet \\ \text{Mn} \bullet \end{array}$	$[\text{Kr}] 5s^1 4d^{10}$
$\begin{array}{c} \bullet \\ \text{Mo} \end{array}$	$[\text{Ar}] 4s^2 3d^6$
$\begin{array}{c} \bullet \\ \text{Fe} \bullet \end{array}$	$[\text{Xe}] 6s^2 4f^1 5d^1$
$\begin{array}{c} \bullet \\ \text{Ag} \bullet \end{array}$	$[\text{Ar}] 4s^2 3d^5$
$\begin{array}{c} \bullet \\ \text{Ce} \bullet \end{array}$	$[\text{Kr}] 5s^1 4d^5$

Day 4 – Thursday 11/7

Isotopes, Ions, and Electron Counts

Directions: Use the isotope notation to determine how many electrons each atom has.

Symbol **Charge** **# of Electrons = protons - electrons = charge** ____

$^{40}\text{Ca}^{2+}$ +2

$^{56}\text{Fe}^{3+}$ +3

$^{35}\text{Cl}^{-}$ -1

$^{27}\text{Al}^{3+}$ +3

$^{19}\text{F}^{-}$ -1

Follow-up Questions:

1. Which type of element tends to form **cations**?
2. Which type tends to form **anions**?