

Chapters 9 and 10 SI Session

Warm-up: Complete the following riddle by using your knowledge of chemistry and the key.

- What did the buffalo say to his son when he dropped him off for his first day of school?

B y e s s N

1. 2. 3. 4. 5. 6.

Key:

1. Electrons are transferred from one atom to the other. B	S lone pairs
2. Nobel gases have an Y	E Duet
3. Valance shells that are stable with 2 electrons. E	B Ionic bond
4. Pairs of electrons that are only on 1 atom S	O valance shell electron repulsion theory. (VSEPR).
5. Theory used to predict the shape of molecules. O	X octet
6. Electrons are shared between 2 atoms. N	N covalent bond

Chapter 9 continued:

- Determine the electron configuration for Neon:

- What are orbital diagrams?

a.

Shows
the electrons
as arrows in a
box representing
the orbital

Key

3. Describe what Valence Electrons are:

- a. Located in valence shell,
do bonding / reacts w/ other
atoms.

4. Describe Periodic trends such as atomic size, ionization energy, and metallic character.

a. Atomic size

→
dec

↓ inc

b. Ionization Energy:

→
inc

↓ dec

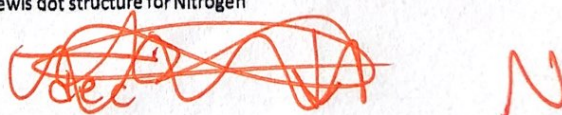
c. Metallic Character:

→
dec

↓ inc

Chapter 10: Lewis Dot Diagrams

1. Draw a Lewis dot structure for Nitrogen



2. Which electrons form bonds in a Lewis dot diagram?

Single / unpaired
electrons.

3. What are ionic bonds?

Electrons are transferred from 1 atom to another

4. What are covalent bonds:

Electrons shared between 2 or more atoms

5. What are lone pairs?

Pairs of electrons only on 1 atom.

6. What is an octet, what is a duet?

Octet - Stable w/ 8 valence electrons

Duet - Stable w/ 2 valence electrons.