Name: _____ Date: _____ Period: _____

- Atoms are so small that the number of them in a baseball is roughly equal to the number of

  _____ balls that could fit inside a hollow sphere as big as the

  _____.

- Because atoms are so small, it is difficult to create _____

  _____ of what atoms actually look like.

- Instead, scientists create _____ _____ that are used to

  explain the ways atoms interact.

- One useful conceptual model of the atom is _____ _____

  atomic model.

- This model consists of a central _____ surrounded by electrons traveling in certain

  _____ _____, much like the planets circling the sun.

- There are _____ different energy levels, each represented by a

  _____ (horizontal row) on the periodic table.

- In the Bohr model, each _____ _____ can only hold a

  _____ certain number of electrons, just like each period can only hold a certain

  number of _____.

Fill in the requested information below:

Period	Number of Elements	Energy Level	Maximum Number of Electrons

Draw Bohr models for the following atoms:

1. lithium   2. boron   3. nitrogen

4. neon   5. sodium   6. carbon

- The _____ of and _____ of the electrons significantly affect

  chemical properties.

- Specifically, it is the _____ (outermost) electrons that affect how an atom will interact

  with other atoms.

- Atoms are most stable when they have _____ valance shells.

- The elements that naturally have full valence shells are the _____.

- Other elements will gain, lose, or share electrons during chemical reactions in order to get this

  _____.

- Notice, elements in the same _____ (vertical column) on the periodic table will

  have the same number of _____.

- The group the element is found in on the periodic table can also help us to predict how many electrons

  the element will gain, lose, or share during a chemical _____.

Group	Valence Electrons	Add __ Electrons	Lose __ Electrons

- The valence electrons are the only electrons that affect the _____.of an atom.

- A more simple model, the _____., includes only these electrons.

Draw Lewis Dot Structures for the following atoms:

1. lithium   2. boron   3. nitrogen

4. neon   5. sodium   6. carbon