

## Full Valence Shells

Use with textbook page 127.

1. What information does the charge of an ion give?
- \_\_\_\_\_

2. Why do atoms become ions? \_\_\_\_\_

3. a) Draw the Bohr diagram for a fluoride ion and a sodium ion in the first two columns of the table.

| Fluorine Ion | Sodium Ion | Noble Gas = _____ |
|--------------|------------|-------------------|
|              |            |                   |

- b) What noble gas would have the same electron arrangement as a fluoride ion and a sodium ion? Draw the Bohr diagram for that noble gas in the third column of the table above.

- c) What do these two ions have in common with the noble gas?
- \_\_\_\_\_

4. a) Draw the Bohr diagram for a helium atom in the first column of the table.

| Helium Atom | Ion #1 = _____ | Ion #2 = _____ |
|-------------|----------------|----------------|
|             |                |                |

- b) What two ions would have the same electron arrangement as a helium atom? Draw the Bohr diagrams for these two ions in the second and third columns in the table above.