

## How is the Periodic Table Arranged?

Below is a portion of the periodic table. In the answer spaces provided in the table, fill in the [1] atomic number, [2] electron configuration, [3] number of shells, and [4] number of outer shell electrons as indicated in the key below. Then, answer the questions that follow.

### KEY



Moseley

Symbol
[1] Atomic Number _____
[2] Electron Configuration _____
[3] Number of Shells _____
[4] Number of Outer Electrons _____



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<b>H</b> [1] _____ [2] _____ [3] _____ [4] _____							<b>He</b> [1] _____ [2] _____ [3] _____ [4] _____
<b>Li</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>Be</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>B</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>C</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>N</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>O</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>F</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>Ne</b> [1] _____ [2] _____ [3] _____ [4] _____
<b>Na</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>Mg</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>Al</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>Si</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>P</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>S</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>Cl</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>Ar</b> [1] _____ [2] _____ [3] _____ [4] _____
<b>K</b> [1] _____ [2] _____ [3] _____ [4] _____	<b>Ca</b> [1] _____ [2] _____ [3] _____ [4] _____						

Answer the questions below by referring to the data on the table you filled in on the first page.

1. In what order are the elements of the *Periodic Table* arranged? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. What do all the elements in a vertical column of the *Periodic Table* have in common? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. What do all the elements in a horizontal row of the *Periodic Table* have in common? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. By what two characteristics are all the elements of the *Periodic Table* placed in a particular row and column? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5. Imagine element number 15 had never been discovered. What characteristics would you predict it to have based on its location on the periodic table? \_\_\_\_\_

H							He
Li	Be	B	C	N	O	F	Ne
Na	Mg	Al	Si	?	S	Cl	Ar
K	Ca	⋮					

\_\_\_\_\_

\_\_\_\_\_

6. Which element has 3 outer electrons and 2 shells? \_\_\_\_\_

7. How is helium different from neon and argon? How is it similar? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_