Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

To fill in the chart login to your connected.mcgraw-hill.com account. Use the virtual lab atomic structure and chemical bonds simulation.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Element Name | Atomic Number | Symbol | Atomic Mass | Mass Number | Number of Protons | Number of Neutrons | Number of Electrons | Will atom form chemical bonds with other atoms |
| Element 1 |  |  |  |  |  |  |  |  |  |
| Element 2 |  |  |  |  |  |  |  |  |  |
| Element 3 |  |  |  |  |  |  |  |  |  |
| Element 4 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

Answer the Extended Response Questions to conclude your results

1. What are electron energy levels? Where are they located?

2. What is the maximum number of electrons that can be held in the first electron energy level of an atom? In the second energy level?

3. Which of the elements you modeled are stable? Why?

4. If two elements have same number of protons but different number of neutrons, can they be atoms of the same element?