Science 8 - The Atom – notes **Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Draw a model of an Atom:

|  |  |  |  |
| --- | --- | --- | --- |
| **Particle** | **Location** | **Charge** | **Mass** |
| Proton |  |  |  |
| Neutron |  |  |  |
| Electron |  |  |  |

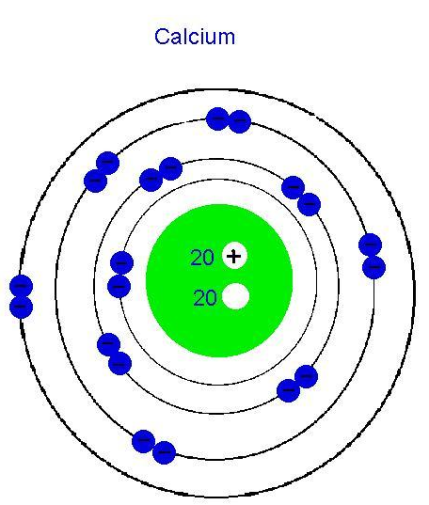
**Inquiry Activity:**

1. Take a package of 20 elements.
2. As a group decide how to put them in order.
3. Once they are in order - find a **property** that allows you to divide them into 4 groups.
4. Show me once you feel you have solved the puzzle

Questions to answer about 20 elements:

1. What happens to the number of protons as you move from smallest to biggest?
2. What happens to the number of neutrons as you move from smallest to biggest?
3. Are the number of protons and neutrons always the same?
4. What happens to the number of electrons as you move from smallest to biggest?
5. Which particles are found in the nucleus?
6. Which particle in the nucleus always has the same amount as the number of electrons?

**Orbitals:**

1. Describe how are the electrons organized?
2. What is the maximum number of electrons found in each orbit?

|  |  |
| --- | --- |
| Orbit | Max # of Electrons |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |

1. Relate this organization to the four groups that you made?

